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ABSTRACT

Presented is the final report of a 2-year project to develop an examplary model classroom program and curriculum for the secondary learning disabled student. Section I consists of completed forms entitled Project Completion Report, Termination Report, and Equipment Inventory. Outlined in Section II is information on the following project components: project personnel; original project objectives; participants/clientele; proceudres, services, and activities; evaluation procedures; formal research and evaluation findings (which included significant academic gains achieved by students after 1 year of participation in the program); project outcomes; implications of project results; factors relevant to success and shortcomings; concrete project outputs; dissemination; continuation of project activities after cessation of federal funds; and efforts by other agencies to adopt or adapt project activities. Appendixes, which make up over half the document, include a detailed report on student progress and characteristics, tables showing students' scores on various tests used for project evaluation; and the names and addresses of recipients of project materials. Also provided are tables on the objectives, procedures/activities, and services/outcomes for the first and second year of curricular development, on location, level, and enrollment of secondary learning disabilities classes; and on distribution of students by grade level. (SBH)

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EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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TITLE III: CURRICULAR DEVELOPMENT FOR SECONDARY LEARNING DISABILITIES

FINAL REPORT

Prepared by:
Libby Goodman, Ed.D., Project Director

Montgomery County Intermediate Unit 23
Dennis U. Harken, Ph.D., Executive Director
J. Steven Banks, Ph.D., Director of Special Education
Libby Goodman, Ed.D., Coordinator of Learning Disabilities Programs

EC103362

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Learning Disabilities In The Secondary School: Student Progress And Characteristics

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SECTION I

PROJECT INFORMATION

Project Director.

MMONWEALTH OF PENNSYLVANIA - DEPARTMENT OF EDUCATION

PROJECT COMPLETION REPORT
Elementary and Secondary Education Act of 1965 - (PL 89-10)
Title III

E-85A (10/74)

STRUCTIONS: Prepare original and three copies for Title III projects. Retain one py; send original and other copies to Title III Coordinator, Department of Education, ox 911, Harrisburg, Pa. 17126.

Final Project Completion Report should be submitted upon payment of the ligations outstanding on the closing date of the project. The Final Project etion Report is due 90 days after the closing date for each Title III grant ard period.

LOCAL EDUCATIONAL AGENCY: Montg. Co. Intermediate Unit

MAILING ADDRESS AND CODE: 6198 Butler Pike, Blue Bell, Pa

COUNTY: Montgomery

BUDGET PERIOD FROM	TO
7/1/75	6/30/76
AMOUNT APPROVED	**DATE OF REPORT**
50,000.00	9/30/76

ART I - SUMMARY

ITEM	AMOUNT
Total federal cash received	$ 50,000.00
Total federal cash expended (from Part II, Col. I, reverse side)	49,463.52
Federal cash on hand (Item I less Item 2)	536.48
Less funds previously returned	-0-
Federal funds to be returned with this report (make check payable to Commonwealth of Pennsylvania)	536.48

TYPED NAME AND TITLE OF REPORTING OFFICIAL: Dr. Dennis Harkin, Executive Director

FISCAL YEAR: 1975-1976

AUTHORIZED SIGNATURE AND DATE: 10/15/76

PROJECT NUMBER: 74006

AUDIT CERTIFICATION (Required each grant award period)

CERTIFICATION

We have examined the financial documents and accounting records of the above project. In our opinion, the entries on this form represent the financial position of this program after all obligations are paid.

☒ No Objections ☐ Objections (attach to this form)

NAMES OF AUDITORS	MAILING ADDRESS	AUDITORS SIGNATURE	DATE
[illegible] and Company, CPA's	547 Swede Street Norristown, Pa. 19401	Richard [illegible] CPA	10 15 76

TYPED NAME AND TITLE OF LOCAL SCHOOL ADMINISTRATOR: Coordinator, Learning Disabilities Program

SIGNATURE:

PART II - CATEGORIZATION OF FUNDS EXPENDED

PROJECT NUMBER

74006

COLUMN 1 - Total must equal Item 2, Part I

ACCOUNT NUMBER	EXPENDITURE ACCOUNTS	COLUMN 1 - CASH DISBURSED			
		SALARIES	CONTRACTED SERVICES	OTHER	TOTAL DISBURSEMENTS
0100	Administration		4,474.29		4,474.29
0210	Instructional Salaries	25,053.72			25,053.72
0221	Textbooks			1,707.29	1,707.29
0222	Teaching Supplies			1,399.98	1,399.98
0223	Library Books and Supplies			520.92	520.92
0224	Audio-Visual Materials				
0229	Other Materials			694.96	694.96
0231	In-Service		210.00		210.00
0239	Travel			2,342.28	2,342.28
0250	Contracted Instruction		9,182.16		9,182.16
0300	Pupil Personnel Services				
0400	Health Services				
0500	Pupil Transportation				
0800	Operation and Maintenance			340.00	340.00
0831	Retirement			92.05	92.05
0832	Social Security			1,465.65	1,465.65
0833	Workmen's Compensation			62.63	62.63
0834	Insurance			98.59	98.59
0838	Rentals			1,705.00	1,705.00
0962	Food Services				
1000	Student Activities				
1100	Community Services				
1200	Capital Outlay				
1241	Sites				
1242	Buildings				
1243	Instructional Equipment			114.00	114.00
1244	Noninstructional Equipment				
	TOTALS	25,053.72	13,866.45	10,543.35	49,463.52

Commonwealth of Pennsylvania - Department of Education

LOCAL EXPENDITURE RECORD AND REPORT

ESEA (PL 89-10) Title I ( ) III (X) VI ( )
(Check one)

DEBE-61 (3/72)

INSTRUCTIONS: See Reverse Side

PROJECT NUMBER #74006

DATE APPROVED June 30,1975

LOCAL EDUCATIONAL AGENCY Montgomery Co. I.U.

MAILING ADDRESS 6198 Butler Pike

COUNTY Blue Bell, Pa. 19422

SUMMARY OF FEDERAL FUNDS RECEIVE

Prior Receipts $ 33,563.

Received This Quarter $

Total Receipts $

DATES CHRON. ORDER	ORDER NO.	CHECK NO.	VENDOR OR CHARGE AND BRIEF DESCRIPTION*	CODE NO.	AMOUNT OBLIGATED	AMOUNT PAID	AVAILABLE BALANCE
1	2	3	4	5	6	7	8
			Bro't Forw'd		433.25	28,739.99	4,390.51
4/9/76	170		Peak Personnel, Inc.-Part time Sect. Wks. ending		252.18		4,138.33
			3/27 & 4/3/76				
4/9/76	171		M.C.I.U. Special Ed. Center,Duplication chgs.,March	229	1,20		4,137.13
4/30/76	174		Mr. Wm. Oates,Statistical analysis on the needs				
			asessment and secondary testing	100	250.00		3,887.13
4/30/76	175		Mr. Levy,Catering services for luncheon at in-service	231	180.00		3,707.13
			for secondary learning disabilities				
4/30/76	170	18412	Peak Personnel,Inc.	250	(252.18)	252.18	3,707.13
4/30/76	131	18413	Allyn & Bacon	221	(2.72)	2.72	3,707.13
4/30/76	154	18414	Marfex Asso, Inc.	221	(228.50)	237.16	3,698.47
4/30/76	157	18415	Special Services Supply	221	(42.75)	55.50	3,685.72
4/30/76	136	18416	Nat'l. Geo. World	223	(4.85)	4.85	3,685.72
4/30/76	168	18417	Charles E. Merrill	223	(10.00)	11.76	3,683.96
4/30/76	171	18418	M.C.I.U. Special Ed. Center	229	(1.20)	1.20	3,683.96
4/30/76	166A	18419	Pat Bourexis	250	(100.00)	78.47	3,705.49
			Totals Forwarded		474.43	29,383.83	3,705.49

* See Instructions on the Back

8

9

Commonwealth of Pennsylvania - Department of Education

LOCAL EXPENDITURE RECORD AND REPORT

ESEA (PL 89-10) Title I ( ) III ( ) VI ( )
(Check one)

DEBF-61 (3/72)

INSTRUCTIONS: See Reverse Side

PROJECT NUMBER #74006

DATE APPROVED June 30,1975

LOCAL EDUCATIONAL AGENCY Montg. Co. Intermediate Unit

MAILING ADDRESS 6198 Butler Pike

COUNTY Montg.

SUMMARY OF FEDERAL FUNDS RECEIVED

Prior Receipts $33,563.75

Received This Quarter $

Total Receipts $

DATES CHRON. ORDER 1	ORDER NO. 2	CHECK NO. 3	VENDOR OR CHARGE AND BRIEF DESCRIPTION* 4	CODE NO. 5	AMOUNT OBLIGATED 6	AMOUNT PAID 7	AVAILABLE BALANCE 8
			Bro't Forw'd		474.43	29,383.83	3,705.49
4/30/76	167	18420	Allyn & Bacon	223	(17.90)	15.32	3,708.07
4/9/76		6240	M.C.I.U. p/r-Per deim 3/15/76 thru 3/26/76	210		974.70	2,733.37
4/9/76		6241	M.C.I.U. p/r-First quarter Soc. Sec. 1976	832		433.68	2,299.69
4/23/76		6243	M.C.I.U. p/r-Per deim 3/29/76 thru 4/9/76	210		1,069.60	1,230.09
				239		149.10	1,080.99
2/9/76		6225	Public Sch. Emp. Ret. Fund-Emplorer's share 2nd half 1975 retirement	831		92.05	988.94
4/30/76		D/M	M.C.I.U. Federal Proj. Dept. Budget-Bkkg.chgs. Jan.Feb. & Mar. 1976	250		300.00	688.94
5/3/76	172		Dr. Gladys Richie-Chairperson for evaluation of project-5/3/76 &5/4/76	100	200.00		488.94
5/3/76	173		Mr. jos. Carabba-Member of evaluation team 5/3-5/4	100	150.00		338.94
5/4/76	173	18423	Mr. Jos. Carabba	100	(150.00)	150.00	338.94
5/4/76	172	18423	Dr. Gladys Richie	100	(200.00)	200.00	338.94
			Totals Forwarded		456.53	32,768.28	338.94

* See Instructions on the Back

Commonwealth of Pennsylvania • Department of Education

LOCAL EXPENDITURE RECORD AND REPORT

ESEA (PL 89-10) Title I ( ) III (XX) VI ( )
(Check one)

DESE-61 (3/72)

INSTRUCTIONS: See Reverse Side

PROJECT NUMBER #74006

DATE APPROVED June 30,1975

LOCAL EDUCATIONAL AGENCY Montgomery County Intermediate Unit

MAILING ADDRESS 6198 Butler Pike,Blue Bell,Pa.

COUNTY Montgomery

SUMMARY OF FEDERAL FUNDS RECEIVED

Prior Receipts $ 33,563.7

Received This Quarter $____

Total Receipts $____

DATES CHRON. ORDER 1	ORDER NO. 2	CHECK NO. 3	VENDOR OR CHARGE AND BRIEF DESCRIPTION* 4	CODE NO. 5	AMOUNT OBLIGATED 6	AMOUNT PAID 7	AVAILABLE BALANCE 8
			Bro't Forw'd		456.53	32,768.28	338.94
5/4/76	176		Dr. Lawrence Lieberman-Consultation fee 5/27-5/28	250	300.00		38.94
5/4/76	177		James E. Ysseldyke-Consultative services 5/19-5/20	250	300.00		(261.06)
5/11/76	178		Harcourt Brace Jovanovich, Inc.-Grading tests	250	28.00		(289.06)
			Nat'l. Norms & Summary Reports				
5/11/76	179		Peak Personnel, Inc.-Part time Sect. for weeks	250	337.84		(626.90)
			ending 4/10-4724-5/1/76				
5/11/76	150		Marianne Price-Submission of Program Evaluation	250	413.00		(1,039.90)
			Report				
5/31/76	155	18421	Pruett Press, Inc. Increase on math books	221		1.71	(1,041.61)
5/31/76	162	18422	Grune & Stratton, Inc.	223	(29.25)	32.48	(1,044.84)
5/31/76	179	*6351	Peak Personnel, Inc.	250	(337.84)	337.84	(1,044.84)
5/31/76	150	6352	Marianne Price	250	(413.00)	413.00	(1,044.84)
5/31/76	138	6353	Science Research Asso.	221	(35.63)	35.63	(1,044.84)
5/31/76	177	6354	James E. Ysseldyke	250	(300.00)	300.00	(1,044.84)
5/31/76	176	6355	Dr, Lawrence Leiberman	250	(300.00)	300.00	(1,044.84)
5/ 7/76		6246	M.C.I.U. P/R-Per deim 4/12-4/23	210		777.10	(1,821.94)
5/21/76		6248	M.C.I.U. P/R-Per deim 4/26-5/7/76	210		1,118.07	(2,940.01)
				239		72.80	(3,012.81)
			Totals Forwarded		419.65	36,156.91	(3,012.81)

* See Instructions on the Back

* New series of checks

Commonwealth of Pennsylvania - Department of Education

LOCAL EXPENDITURE RECORD AND REPORT

ESEA (PL 89-10) Title I ( ) III ( ) VI ( )
(Check one)

DEBE-61 (3/72)

INSTRUCTIONS: See Reverse Side

PROJECT NUMBER 74006

DATE APPROVED 6/30/76

LOCAL EDUCATIONAL AGENCY Montg. Co. Intermediate Unit

MAILING ADDRESS 6198 Butler Pike

COUNTY Montg.

SUMMARY OF FEDERAL FUNDS RECEIVE

Prior Receipts $ 33,563.7

Received This Quarter $

Total Receipts $ 33,563.7

DATES CHRON. ORDER 1	ORDER NO. 2	CHECK NO. 3	VENDOR OR CHARGE AND BRIEF DESCRIPTION* 4	CODE NO. 5	AMOUNT OBLIGATED 6	AMOUNT PAID 7	AVAILABLE BALANCE 8
			Bro't Forw'd		419.65	36.156.91	(3,012.81)
6/2/76	182		James Ysseldyke-Expenses iocurred for consultant	250	294.08		(3,306.89)
			5/19-5/20				
6/3/76	183		Dr. Laurence Lieberman-Expenses incurred of consultant				
			5/27-5/28	250	178.06		(3,484.95)
6/3/76	184		Educational Records Bureau-Spelling Booklets, Diagnostic				
			Manuals & Speicimen Set	222	19.98		(3,504.93)
6/3/76	185		Peak Personnel Inc.-Secretary for wks. ending 5/8-				
			5/15-5/22	250	359.02		(3,863.95)
6/3/76	186		M.C.I.U. Sp. Ed. Center-Duplicationchgs. for April	229	19.04		(3,882.99)
6/3/76	188		Human Sciences Press-Workbook & Manual	223	5.95		(3,888.94)
6/9/76	189		Andrew M. Lebby-Expenses incurred for consultation	250	221.21		(4,110.15)
			services- 6/2-3-4				
5/26/76	180		D.M. Feldman-100 Pen Badge holders	229	8.80		(4,118.95)
6/1/76	181		Andrew Lebby-Consultative services-6/2-3-4	250	450.00		(4,568.95)
6/3/76	187		Libby Goodman-reimbursement for 2 bks.	223	24.90		(4,593.85)
6/11/76	192		Edu'l. Patterns, Inc.-Instructional systems	222	214.50		(4,808.35)
6/21/76	196		Peak Personnel, Inc.-Part time Sect. for wks. ending	250	357.09		(5,165.44)
			5/29-6/5-6/12				
6/22/76	193		M.C.I.U. Sp. Ed. Center-Chgs. for Telephone services	600	340.00		(5,505.44)
6/22/76	194		M.C.I.U. Sp. Ed. Center-Rental for office space	838	1,705.00		(7,210.44)
6/22/76	195		M.C.I.U. Sp. Ed.-Duplication services for may	229	516.70		(7,727.14)
6/25/76	198		Microfilm Systems, Inc.-Symposuim Proceedings, Needs	100	300.00		(8,027.14)
			Assessment & Literature search				
			Totals Forwarded		5,433.98	36,156.91	(8,027.14)

* See Instructions on the Back

Commonwealth of Pennsylvania - Department of Education

LOCAL EXPENDITURE RECORD AND REPORT

ESEA (PL 89-10) Title I ( ) [✓ III (X)] VI ( ) (Check one)

DEBE-61 (3/72)

INSTRUCTIONS: See Reverse Side

PROJECT NUMBER 74006

DATE APPROVED June 30.1976

LOCAL EDUCATIONAL AGENCY Montgomery County I. U. #23

MAILING ADDRESS
6198 Butler Pike
Blue Bell, Pa. 19422

COUNTY Montgomery

SUMMARY OF FEDERAL FUNDS RECEIVED

Prior Receipts	$ 33,563.75
Received This Quarter	$ 16,436.25
Total Receipts	$ 50,000.00

DATES CHRON. ORDER 1	ORDER NO. 2	CHECK NO. 3	VENDOR OR CHARGE AND BRIEF DESCRIPTION* 4	CODE NO. 5	AMOUNT OBLIGATED 6	AMOUNT PAID 7	AVAILABLE BALANCE 8
			Bro't Forw'd		5,433.98	36,156.91	(8,027.14)
6/25/76	197		Libby Goodman-Travel to Los Angels for observation	239	572.41		(8,599.55)
			of learning disablilties programs at L.A.I.U.				
6/25/76	199		Escrow for Dissemination	100	546.56		(9,146.11)
6/28/76	200		Dreslin & Company-Audit for project yr. 75-76	100	350.00		(9,496.11)
6/28/76	201		Escrow of Social Security	832	522.49		(10,018.60)
6/28/76	202		Escrow of Workmen's Comp.	833	81.00		(10,099.60)
6/28/76	190		Eugene Anthony-Printing of 300 copies of the	100	2,621.00		(12,720.60)
			Materials Search				
6/28/76	191		Eugene Anthony-Printing of 500 microfiche envelopes	100	73.42		(12,794.02)
6/30/76	c/r		Commenwealth of Penna. $16,436.25				3,642.23
6/30/76	184	6356	Educational Records Bureau	222	(19.98)	19.98	3,642.23
6/30/76	186	6357	M.C.I.U. Special Ed. Center	229	(19.04)	19.04	3,642.23
6/30/76	175	6358	ScS Catering Service	231	(180.00)	210.00	3,612.23
6/30/76	182	6359	James Ysseldyke	250	(294.08)	294.08	3,612.23
6/30/76	183	6360	Dr. Lawrence Lieberman	250	(178.06)	178.06	3,612.23
6/30/76	185	6361	Peak Person el Inc.	250	(359.02)	359.02	3,612.23
6/30/76	181	6362	Andrew Libby	250	(450.00)	450.00	3,612.23
" " "	189	"	"	"	(221.21)	221.21	3,612.23
6/30/76	178	6363	Harcourt Brace & Novanovick	250	(28.00)	30.29	3,609.94
6/30/76	192	6364	Educational Pattern's, Inc.	222	(214.50)	214.50	3,609.94
			Totals Forwarded		8,236.97	38,153.09	3,609.94

* See Instructions on the Back

Commonwealth of Pennsylvania • Department of Education

LOCAL EXPENDITURE RECORD AND REPORT

ESEA (PL 89-10) Title I ( ) III (X) VI ( )
(Check one)

DEBE-61 (3/72)

INSTRUCTIONS: See Reverse Side

PROJECT NUMBER 74006

DATE APPROVED June 30, 1976

LOCAL EDUCATIONAL AGENCY Montgomery County I. U. #23

MAILING ADDRESS
6198 Butler Pike
Blue Bell, Pa. 19422

COUNTY Montgomery

SUMMARY OF FEDERAL FUNDS RECEIVED

Prior Receipts $ 50,000.00

Received This Quarter $

Total Receipts $

DATES CHRON. ORDER 1	ORDER NO. 2	CHECK NO. 3	VENDOR OR CHARGE AND BRIEF DESCRIPTION* 4	CODE NO. 5	AMOUNT OBLIGATED 6	AMOUNT PAID 7	AVAILABLE BALANCE 8
			Bro't Forw'd		8,236.97	38,153.09	3,609.94
6/30/76	187	6365	Libby Goodman	223	(24.90)	24.90	3,609.94
6/30/76	195	6366	M.C.I.U. Sp. Ed. Center	229	(516.70)	516.70	3,609.94
6/30/76	196	6367	Peak Personnel, Inc.	250	(357.09)	357.09	3,609.94
6/30/76	193	6368	M.C.I.U. Sp. Ed. Center	600	(340.00)	340.00	3,609.94
6/30/76	194	6369	M.C.I.U. Sp. Ed. Center	838	(1,705.00)	1,705.00	3,609.94
6/4/76		6250	M.C.I.U. p/r a/c-Per deim 5/10 thru 5/21/76	210		1,250.40	2,359.54
6/18/76		6254	M.C.I.U. p/r a/c-Per deim 5/24 thru 6/4	210		1,081.50	1,278.04
6/28/76		D/M	M.C.I.U. Federal Proj. Dept Budget-Chgs for Bkkg.	250		275.00	1,003.04
			April, May, June				
7/31/76	199	6370	Peak Personnel, Inc.	100	(546.56)	102.56	1,447.04
6/25/76	199		Escrow for Dissemination	100	444.00		1,003.04
6/25/76		6255	M.C.I.U. p/r/ a/c/-Per Deim 6/21 thru 6/30/76	210		414.70	588.34
				239		167.94	420.40
7/14/76	201	6258	Montg. Co. Payroll a/c Social Security	832	(522.49)	366.88	576.01
6/28/76	201		Escrow Social Security	832	155.61		420.40
7/16/76		6259	M.C.I.U. p/r-Travel for June	239		8.12	412.28
7/29/76	197		M.C.I.U. p/r	239	(572.41)	575.29	409.40
			Totals Forwarded		4,251.43	45,339.17	409.40

* See Instructions on the Back

Commonwealth of Pennsylvania - Department of Education

LOCAL EXPENDITURE RECORD AND REPORT
ESEA (PL 89-10) Title III

DESE-61A (3/73)
INSTRUCTIONS: See Reverse Side
PROJECT NUMBER 74006
DATE APPROVED 6/30/76

LOCAL EDUCATIONAL AGENCY
Montgomery County I. U. #23

MAILING ADDRESS
6198 Butler Pike
Blue Bell, Pa. 19422

COUNTY
Montgomery

SUMMARY OF FEDERAL FUNDS RECEIVED

Prior Receipts	$ 50,000.00
Received This Quarter	$ -
Total Receipts	$ 50,000.00

DATES CHRON. ORDER	ORDER NO.	CHECK NO.	VENDOR OR CHARGE AND BRIEF DESCRIPTION*	CODE NO.	AMOUNT OBLIGATED	AMOUNT PAID	AVAILABLE BALANCE
1	2	3	4	5	6	7	8
			Bro't Forw'd		4,251.43	45,339.17	409.40
8/31/76		6371	Check void				
8/31/76	191	6372	Montg. Co. I.U. Graphic Center - Printing of 500 microfiche envelopes	100	(73.42)	73.42	409.40
	190	6372	Montg. Co. I.U. Graphic Center - Printing of 300 copies of material search	100	(2,621.00)	2,621.00	409.40
8/31/76	174	6373	William Oates - Statistical analysis on the needs assessment & secondary testing	100	(250.00)	250.00	409.40
8/31/76	188	6374	Human Sciences Press - Workbook and Manual	223	(5.95)	6.93	408.42
8/31/76	180	6375	D. M. Feldman - One hundred pin badge holders	229	(8.80)	8.80	408.42
			Totals Forwarded		1,292.26	48,299.32	408.42

* See Instructions on the Back

Commonwealth of Pennsylvania • Department of Education

LOCAL EXPENDITURE RECORD AND REPORT

ESEA (PL 89-10) Title I ( ) III (X) VI ( )
(Check one)

DEBE-61 (3/72)

INSTRUCTIONS: See Reverse Side

PROJECT NUMBER 74006

DATE APPROVED June 30, 1976

LOCAL EDUCATIONAL AGENCY

Montgomery County I. U. #23

MAILING ADDRESS*
6198 Butler Pike
Blue Bell, Pa. 19422

COUNTY Montgomery

SUMMARY OF FEDERAL FUNDS RECEIVED

Prior Receipts	$ 50,000.00
Received This Quarter	$
Total Receipts	$ 50,000.00

DATES CHRON. ORDER 1	ORDER NO. 2	CHECK NO. 3	VENDOR OR CHARGE AND BRIEF DESCRIPTION* 4	CODE NO. 5	AMOUNT OBLIGATED 6	AMOUNT PAID 7	AVAILABLE BALANCE 8
			Bro't Forw'd		1,292.26	48,299.32	408.42
9/30/76	198	6376	Microfilm Systems, Inc.	100	(300.00)	300.00	408.42
9/30/76	199	6376	" " "	100	(444.00)	27.00	825.42
9/30/76	199		Escrow of Dissemination (Reobligate)	100	417.00		408.42
9/30/76	199	6377	M.C.I.U. Sp. Ed. Center	100	(417.00)	286.56	538.86
6-25-76	199		Escrow of Dissemination (Reobligate)	100	130.44		408.42
9/30/76	199	6378	Joni Carlson	100	(130.44)	113.75	425.11
9/30/76	199		Escrow of Dissemination (Reobligate)	100	16.69		408.42
9/30/76	200	6379	Dreslin & Company Audit of Project	100	(350.00)	350.00	408.42
9/30/76	202	6380	P.S.B.A. Insurance Trust Workmen's Compensation	833	(81.00)	62.63	426.79
9/30/76	210	6272	M.C.I.U. Payroll a/c Social Security	832	(155.61)	24.26	558.14
9/30/76	199		To cancel balance of P.O. 199	100	(16.69)		574.83
9/30/76	131		Deobligated in error Allyn & Bacon Increase on P.O.	221	2.72		572.11
9/30/76	138		Deobligated in error Science Research " " " "	221	35.63		536.48
			Totals Forwarded		-0-	49,463.52	536.48

*See Instructions on the Back

COMMONWEALTH OF PENNSYLVANIA - DEPARTMENT OF EDUCATION

TERMINATION REPORT - ESEA TITLE III

[illegible]-1393 (7/74)

INSTRUCTIONS: DUE DATE: 90 days after last grant period date. Complete and return report to ESEA Title III, Bureau of Planning and Evaluation, Department of Education, Room 501, Education Building, Box 911, Harrisburg, Pennsylvania 17126.

SECTION I - PROJECT INFORMATION

NAME OF LOCAL EDUCATIONAL AGENCY
Montgomery County Intermediate Unit #23

ADDRESS
6198 Butler Pike
Blue Bell, PA 19422

ZIP CODE

PROJECT TITLE
Curricular Development of Secondary Learning Disabilities

PROJECT TYPE
☐ REGULAR ☒ SPECIAL ED ☐ GUIDANCE

PROJECT NUMBER
F4-74006H-46-23-01-13

NAME OF IU IN WHICH LEA IS LOCATED
Montgomery County Intermediate Unit

NUMBER (IU)
#23

CONGRESSIONAL DISTRICTS IN SERVICE AREA OF PROJECT

BRIEFLY SUMMARIZE THE PURPOSE OF THE PROJECT (BRIEF ABSTRACT)

NAME OF PROJECT DIRECTOR (MOST RECENT)
Libby Goodman, Ed.D.

ADDRESS
Montgomery County Intermediate Unit #23
6198 Butler Pike, Blue Bell, PA

ZIP CODE
19422

NAME OF PERSON AUTHORIZED TO RECEIVE GRANT
Dr. Dennis Harken

POSITION OR TITLE
Executive Director

AREA CODE AND PHONE NUMBER
(215) 643-7600

ADDRESS
6198 Butler Pike
Blue Bell, PA 19422

ZIP CODE
19422

SIGNATURE OF PERSON AUTHORIZED TO RECEIVE GRANT

DATE SUBMITTED
9-30-76

INDICATE DEGREE TO WHICH TITLE III PROJECT ACTIVITIES HAVE CONTINUED AFTER PHASE-OUT OF FEDERAL SUPPORT.

☐ ACTIVITIES NOT CONTINUED

☐ ACTIVITIES CONTINUED AT LESS THAN ORIGINAL PROJECT LEVEL

☐ ACTIVITIES CONTINUED AT SOME LEVEL AS ORIGINAL APROJECT

☒ ACTIVITIES CONTINUED AT GREATER OR EXPANDED LEVEL ABOVE ORIGINAL PROJECT LEVEL

IF THE PROJECT HAD PROJECT DIRECTOR(S) IN ADDITION TO THAT NAMED ABOVE, LIST BY NAME AND INDICATE DATES DURING WHICH EACH HELD POSITION.

IS THE MOST RECENT PROJECT DIRECTOR NAME NAMED ABOVE PRESENTLY A MEMBER OF LEA'S STAFF? ☒ YES ☐ NO

IF NOT, INDICATE HIS MOST RECENT KNOWN ADDRESS

INDICATE LOCATION OF PROJECT'S FISCAL AND PROGRAM RECORDS.

1605 B West Main St. and 6198 Butler Pike
Norristown, PA Blue Bell, PA

LIST ALL GRANT AWARD LETTERS, INCLUDING AMENDMENTS TO AWARDS (INCREASES OR DECREASES INDICATED BY AN *.)

DATE(S) OF AWARD	AMOUNT	PROJECT BUDGET PERIOD		AMOUNT UNCLAIMED OR RETURNED
		FROM	TO	
July, 1974	$ 55,000.00	7/74	7/75	$1,775.00 & $3,246.9
July, 1975	50,000.00	7/75	7/76	$
				$
				$
				$

SECTION II - PROGRAM SUMMARY INFORMATION

(Summarize on separate sheets of paper in narrative form for entire life of project using following suggested outline)

1. List and describe the personnel positions of the project indicating the following: positions which were in effect throughout project's life, those which met special needs during only a portion of the project, part-time vs. full-time positions, use of consultants, para-professional and clerical staff.

2. State the purpose of your project in terms of its original objectives. If any deviations from the project's original objectives occurred, state the new objectives and explain why the changes were necessary.

3. Describe the participants/clientele of the project. What was the target group of the project's activities? How were the participants selected? Was the project for a single district? several districts? within a county? regional? Statewide consortium? Give approximate numbers of participants. Was there an identifiable indirect clientele? If in-service of teachers or other staff was a component, describe selection process for participants and whether in-service was done primarily in summer or during school year. Note also degree of non-public school involvement.

4. Specify the procedures utilized to attain the project's present objectives. (Include types or services and activities.)

5. Describe all evaluation procedures used during the life of the project. Similarly, describe any subsequent evaluation activities. (Do not include on-site evaluation.)

6. Describe any "hard data" that has resulted from evaluation activities of the project (i.e., research findings).

7. Specify the project's outcomes or results in order of importance.

8. Discuss the implications of the project's results as they relate to your LEA; to education in general.

9. List the most prominent factors pertinent to the project's successes in order of importance. Explain.

10. List the most prominent factors pertinent to the project's shortcomings in order of importance. Explain.

11. List the "concrete" outputs of the project, i.e., did the project produce curriculum guides, a manual for implementing new teaching strategies, resource collections, evaluation instruments, or any other tangible products capable of being shared with other interested persons. As part of your response, include your annotated bibliographies of instructional and curriculum materials and audiovisual programs.

12. Discuss dissemination activities; disregard activities of a strictly public relations nature aimed at the general public; relate only those activities which were intended to promote diffusion of the project's methods or design to other districts or which resulted in other educators seeking information on how to implement your project in their district.

13. Discuss continuation of project activities after withdrawal of Federal support. Include description of strategies used by project personnel to assure continuation.

14. Describe efforts by other districts or Intermediate Units to adopt or adapt in whole or part activities developed by this project.

COMMONWEALTH OF PENNSYLVANIA • DEPARTMENT OF EDUCATION

EQUIPMENT INVENTORY ESEA TITLE III

DESE-1313 (2/74)

LEA NAME Montgomery County Intermediate Unit

LEA ADDRESS 6198 Butler Pike, Blue Bell, PA 19422

PROJECT NUMBER F4-74006

REGION NUMBER #23

LEA'S SIGNATURE

DATE 9-14-76

INSTRUCTIONS:

1. List all non-expendable equipment purchased with Title III funds.
2. Add additional pages using same column headings as needed.
3. Return to Grants Management Officer, ESEA Title III, Division of Development, Bureau of Planning and Evaluation, Department of Education, Box 911, Harrisburg, Pa. 17126.

ITEM DESCRIPTION (1)	COST PER UNIT (2)	NUMBER PURCHASED (3)	TOTAL COST (4)	CALENDAR YEAR PURCHASED (5)	PRESENT LOCATION OF EQUIPMENT (BUILDING AND DIST.) (6)	IF TERMINATED, INDICATE PRESENT USE OF EQUIPMENT (7)
Secretarial Desk	$341.00	1	$341.00	1974	1605 B W. Main St. Norristown, PA 19401	
Secretarial Chair	$ 64.00	1	64.00	1974	"	
IBM Typewriter	$505.00	1	505.00	1974	"	
Executive Desk	$190.50	1	190.50	1975	"	
File Cabinet	$144.25	1	144.25	1975	"	
Executive Chair	$ 71.75	1	71.75	1975	"	
IBM Typewriter	$545.00	1	545.00	1975	"	
Calculator	$365.94	1	365.94	1975	"	
File Cabinet	$151.90	1	151.90	1975	"	
5 Shelf Bookcase	$142.00	1	142.00	1975	"	
Stop Watches	$ 19.50	4	78.00	1976	"	
Earphones	$ 12.00	3	36.00	1976	"	

Equipment currently being used by the Learning Disabilities Program, Montgomery County Intermediate Unit, Norristown, Pennsylvania.

SECTION II

PROGRAM SUMMARY INFORMATION

1. Project Personnel

Year One

July, 1974 to July, 1975

Personnel	Position	Date of Employment
William Kehoe	Full Time - Administrative Assistant	9/1/74 to 4/4/75
Sylvia Katrina	Full Time - Secretary	11/12/74 to 9/12/75
Nita Laver	Part Time - Project Associate	3/31/75 to 12/17/75
Marion DeBrosse	Part Time - Project Associate	4/2/75 to 12/10/75
Barbara Comins	Part Time - Project Associate	5/5/75 to 6/11/76
Joni Carlson	(Part Time Secretarial Service)	4/6/75 to 6/7/75

Year Two

July, 1975 to July, 1976

Maris DeLano	Part Time - Project Associate	10/22/75 to 1/9/76
Claudette Fleishman	Peak Secretarial Service	10/4/75 to 6/11/76
William Wartman	Part Time - Project Associate	12/22/75 to 3/12/76
Marcia Levy-Roesch	Part Time - Project Associate	1/6/76 to 6/4/76
Dana Davis	Part Time - Project Associate	1/20/76 to 6/11/76
Abbe Wolfe	Part Time - Project Associate	2/16/76 to 5/28/76
Cindy Berger	Part Time Secretarial Service	7/1/75 to 9/17/75
Joni Carlson	Part Time - Secretary	4/28/76 to 6/1/76

2. Original Project Objectives

First Year (1974-1975)

Objective 1

A philosophy, rationale, method of identification and curriculum guidelines for a model program for learning disabled adolescents will be developed.

Objective 2

The project staff will conduct a county-wide needs assessment to determine the extent of the learning disabilities problem in our secondary schools.

Objective 3

The project staff will disseminate the Needs Assessment Report and Program Description at local, state, and national meetings and conferences.

Second Year (1975-1976)

Objective 1

A model secondary program for learning disabled adolescents will be established in one or more cooperating schools and formative and summative evaluations carried out.

Objective 2

A progress report will be prepared and submitted to county and state leadership personnel and additional school sites and replication of the program will be solicited.

Third Year (1976-1977)*

Objective 1

The model program will be replicated in additional schools with continuing formative and summative evaluations.

*Due to the reorganization of Title III and the subsequent inclusion of Title III under Title IV, Part C, this project terminated at the end of the second year. The third year objectives were, to the extent possible, accomplished during the second project year. Had there been a third project year as originally projected, the model secondary program would have been further refined and a more elaborate program evaluation completed.

3. Participants/Clientele

First Year (1974-1975)

During its first year, the project reached out to all twenty-one school districts within Montgomery County. Each school district, at the request of the project director, designated a contact person (selected by the superintendent) to represent the district in project activities. The contact person for each district formed the vital communication link between the project staff and local school personnel. Every school district within Montgomery County without exception participated; the parochial schools were represented by Sister Dennis Edward.

The district contact people were most instrumental in the successful completion of the county-wide needs assessment survey. This particular activity involved 62 teachers and 821 sixth grade students. The youngsters' participation was indirect while the teachers were more directly involved in this activity.

In summary, the first year participants included the following persons:

21 school district representatives,
1 parochial school representative,
62 sixth grade teachers,
821 sixth grade students.

The liaison to our local school districts and the parochial school sector was continued through the first year district contact persons, and these 22 representatives participated in project activities during the second year.

Second Year (1975-1976)

While first year activities were continued toward completion or expanded during the second year of the project, classroom programs became the primary focus of the project's second operational year. Seven secondary learning disabilities classes were in operation during the second year; seven teachers, seven teaching aides, and 82 students participated by these classroom programs.

A second needs assessment survey, a replication with modifications of the first year needs assessment survey, was conducted for a selected sample of parochial school children. A total of 16 non-public school teachers and 398 eighth grade parochial school students were involved. In contrast to the first needs assessment survey, completed on a sample of sixth grade pupils, the second survey involved both the examination of student records (indirect student involvement) and direct testing of all the children (direct student involvement).

In summary, the second year participants included the following persons:

21 school district representatives,
1 parochial school representative
16 parochial school teachers,
398 eighth grade parochial school students,
7 secondary learning disabilities teachers,
7 secondary teaching aides,
72 learning disabled students.

Over the two year period, various inservice programs were held. Numerous individuals other than those specified above were in attendance; and these "participants" represented various segments of the professional and lay community, e.g., parents, other Intermediate Unit personnel, etc.

4. Procedures, Services, and Activities

The procedures, services, and activities of the project were dictated, for the most part, by the original project objectives. Procedures and activities were designed to achieve the project's stated objectives; the services (and products) of the project represented the intended outcomes. As procedures and activities are so closely aligned, they will be discussed jointly; services will be discussed separately. The discussion will flow within the framework set by the original objectives; the objectives, activities, and services of the project's first year are distinguished from those of the second year.

First Year (1974-1975)

The overriding purpose of the "Curricular Development for Secondary Learning Disabilities" Project was the development of an exemplary model classroom program to service the secondary learning disabled student. The project, as originally conceived and designed, was to have extended over a period of three years with each year encompassing a different phase of the project. Phase one, coinciding with the first year of the project, was concerned with research and development activities. This preparatory/planning year was absolutely essential to a project which was venturing into an almost unexplored educational domain. The first year activities established the foundation for subsequent project activities and resulted in numerous exportable products (of an informational type) which would be beneficial to both the immediate project personnel and to the larger professional community. The overwhelming demand for the project's printed materials has been evidence of the value of the materials. An overview of the first year objectives, activities, procedures, and services are presented on Table 1.

All of the first year objectives were accomplished; however, in some instances, it was necessary to carry activities, particularly those involving the printing of project documents, into the second year, e.g., while the Needs Assessment Survey was completed during the 1974-75 school year, preparation of the printed document in multiple copies extended into the second year.

Second Year (1975-1976)

During the second year of the project, attention shifted to direct service operations (while some first year activities were continued). Seven secondary learning disability classes were involved in the trial of a tentative model of programming for the learning disabled adolescent. A total of 82 students were enrolled in the classes during the 1975-76 school year.

In addition to the class programs, two additional activities, not contained in the original project proposal, were initiated. Specifically, a second needs assessment survey was conducted during the 1975-76 school year (the first needs assessment survey was done during the 1974-75 school year). This second county-wide survey was a modified version of the initial procedure and involved a smaller sample of parochial school eighth grade students drawn from 16 school sites. The specific screening procedures were the same as those of the initial survey with the addition of direct testing of students (the original survey had been limited to screening of student records).

Relative to programming, it quickly became apparent that curriculum for use with secondary learning disabled students was a critical concern; the need for information on materials suitable for use with the secondary-aged learning disabled pupils was vitally necessary. Consequently, a materials search was undertaken. Curricular Materials for Secondary Learning Disabilities Programs resulted from that effort. This document is now available for dissemination.

These two additional project activities: the second needs assessment survey and the materials search, did not involve any additional funding; the tasks were accomplished through maximal utilization of existing funds and staff. An overview of the second year objectives, activities, procedures, and services are presented in Table II.

Early in the second year, the project was notified that continuation of funding for a third year was highly unlikely due to the reorganization of Title III under Title IV, Part C. The project was indeed terminated at the end of its second year. Program refinement and evaluation, originally projected for the third year, could not be fully accomplished. However, the classroom programs and related activities started by the project will be continued under the aegis of the Learning Disabilities Program of the Montgomery County Intermediate Unit.

TABLE I

CURRICULAR DEVELOPMENT FOR SECONDARY LEARNING DISABILITIES

FIRST YEAR OVERVIEW

OBJECTIVES	PROCEDURE/ACTIVITY	SERVICES/OUTCOMES
Objective 1: A philosophy, rationale, method of identification and curriculum guidelines for a model program for learning disabled adolescents will be developed.	1-a conduct a literature search on the topic of secondary learning disabilities/ preparation of document for dissemination	Learning Disabilities in the Secondary School: A Review of the Literature
	1-b to convene a symposium of noted experts on the topic of secondary learning disabled youth/preparation of document for dissemination	Learning Disabilities in the Secondary School: Symposium Proceedings
	1-c to draft guidelines and a model of service for secondary learning disabled students/prepation of a document for dissemination	Guidelines For the Development and Implementation of Secondary School Programs For Learning Disabled Youth (completed during 2nd year)
Objective 2: The project will conduct a county-wide needs assessment to determine the extent of the learning disabilities problem in our secondary schools.	2-a to conduct a county-wide screening of a selected sample of students: contact districts, select sample, gather data, analyze data, prepare report	Needs Assessment Survey: Final Report
Objective 3: The project staff will disseminate the Needs Assessment Report and Program Description at local, state, and national meetings and conferences.	3-a a county-wide in-service program was held on June , 1975 and May 28, 1976.	

(To be Continued)

TABLE I (CONT'D.)

CURRICULAR DEVELOPMENT FOR SECONDARY LEARNING DISABILITIES

FIRST YEAR OVERVIEW

OBJECTIVES	PROCEDURE/ACTIVITY	SERVICES/OUTCOMES
	3-b project staff delivered presentations at both the CEC and ACLD national conventions	
	3-c all first year products were made available for distribution; all requests for the materials were honored free of charge	A packet containing copies on microfiche of all the documents were prepared in order to increase the availability of the materials.

TABLE II

CURRICULAR DEVELOPMENT FOR SECONDARY LEARNING DISABILITIES

SECOND YEAR OVERVIEW

OBJECTIVES	PROCEDURE/ACTIVITY	SERVICES/OUTCOMES
Objective 1: A model secondary program for learning disabled adolescents will be established in one or more cooperating schools and formative and summative evaluation carried out.	1-a a model secondary program was implemented in 7 school sites	82 students participated in the program
	1-b an evaluation of the classroom program was carried out	Learning Disabilities in the Secondary School: Student Progress and Characteristics
Objective 2: A progress report will be prepared and submitted to county and state leadership personnel and additional school sites and replication of the program will be solicited	1-a a final county-wide in-service program held for review of program results and distribution of program development guidebook	Expansion/adoption of program for the 1976-77 school year
	Additional Undertakings and Accomplishments	
	to replicate the needs assessment survey in the county's parochial schools	Needs Assessment Survey: Phase Two
	to conduct a search for commercially available curricular materials for use with secondary learning disabled students/preparation of a document for dissemination	Curricular Materials for Secondary Learning Disabilities Programs

5. Evaluation Procedures

The evaluation strategy for the project incorporated both formative and summative evaluation in order to continually monitor the progress and evaluate the products and services. Formative evaluation was undertaken to determine if the guidelines and timelines were being adhered to and if the project, in general, was moving toward accomplishment of its goals. Formative evaluation made it possible to spot points along the way where modifications and/or adaptions were necessary rather than maintaining the project on one unalterable course. In actual practice, formative evaluative strategy involved the charting of an objective-activity timeline against which the progress of the project was periodically guaged. Modifications were made as needed and noted on the timeline. Though formative evaluation strategy was relatively uncomplicated, it proved to be most helpful for keeping the staff and project on target.

. Summative evaluation, as originally proposed, was to provide validation evidence of the benefits and utility of the programmatic model. Toward this end, during the second project year a student testing program was carried out to assess student progress in basic school subjects, e.g., mathematics and reading. Excerpts from the evaluation report follows; the reader is referred to Appendix A for the full document containing a detailed description of the testing program and its results.

Evaluation of Student Progress and Characteristics

The purpose of the project was to provide intensive developmental/remedial instruction to learning disabled adolescents in an effort to significantly upgrade their skills in the area of math and language arts.

The data presented speak to this issue. In addition, descriptive data are presented which reveal the status of the students on various tests of physical ability, process skills and vocational interests. It was felt that these areas were worthy of investigation because they might yield information important to educational programming.

The testing program was conducted during the 1975-76 school year for all secondary school students enrolled in the project's learning disabilities classes. The purpose of the testing program was:

1. to measure the academic gains made by the students in those skill areas in which they received remedial instruction, namely, reading and mathematics,

2. to assess the extent of the students' spelling skills and writing skills,

3. to survey students' vocational interests,

4. to determine if process deficits typically manifested in learning disabled children are apparent in the learning disabled adolescent, and

5. to secure group data on the physical development of the learning disabled adolescent to determine if the deficiencies in gross motor skills often associated with the young learning disabled youngster are typical of the learning disabled adolescent.

Sample

A total of 86 students were enrolled in the Montgomery County Intermediate Unit (MCIU) secondary learning disabilities program during the 1975-76 school term.

The learning disability classrooms which these students attended are located in seven suburban and rural school districts in Montgomery County (see Table 3). For the most part, these classes are housed in junior high schools. In fact, all students but two were seventh, eighth, and ninth graders (see Table 4). The average class enrollment was 12 students. Six students (approximately 10%) were black and 57 (approximately 90%) were white; there were 16 females and 47 males. Students' IQs ranged from 80 to 119. At the time of testing, subjects' ages ranged from 12 years, 6 months to 17 years, 5 months.

Discussion of Results

The data reveals that the learning disabled students in this sample have severe deficits in many areas of academic skills. In addition to general deficiencies in reading and mathematics, spelling and specific written language skills pose great difficulty for these students. However, the results show that given an intensive remedial academic program, the students are able to make impressive academic gains in reading and mathematics.

The data also reveals that while the tasks involved in some of the process tests presented no difficulty for most of the secondary learning disabled students in the sample, i.e., tasks of visual motor integration and motor speed and accuracy, other tasks, for example those involving auditory attention and temporal and spatial relations, proved to be extremely difficult for the majority of students. Although a correlation matrix indicated no apparent relationship between process deficits and academic performance this is clearly an area that bears further investigation.

On the vocational interest survey, the students expressed a strong interest in enrolling in vocational-technical programs in high school. A significant number of students also indicated the desire to pursue a college preparatory program. While we believe that numerous curricular options, including vocational-technical and college preparatory programs, should be made available to the learning disabled adolescent, we strongly recommend that the decision-making process involve career counseling based on a student's interests and aptitudes. Where it appears that a student could perform successfully in a particular program, e.g., a vocational-technical program, with supportive services, they should be made available.

Finally, the results of the physical fitness tests indicate that within this atypical population, there is a normal range of performance. Thus, the learning disabled adolescents appear to be as physically fit as their nonhandicapped peers.

The reader is referred to Appendix A for the total evaluation report document.

Student achievement is only one evaluative index which, although it is exceedingly important, can be used to assess the viability of a programmatic model. Other indexes of program success, e.g., attitudinal factors on the part of students, parents, school staff, etc., program adoption, etc., would contribute added support for the program. Assessment of student achievement was intended to be only a preliminary phase of an indepth evaluation of the program encompassing evaluation of both student outcomes and the classroom model per se. The indepth evaluation of the project, and subsequent refinement of the program, were to have been carried out during the projects third and final year. Termination of the project one year early, prevented the accomplishment of these activities.

Numerous documents were produced via this project. The document collection represents the most extensive and comprehensive data base on the topic of secondary learning disabilities available anywhere in the country at the present time. This fact in and of itself speaks to the value of the materials. In addition, the public demand for the materials, perhaps the most important indicator of all, has been overwhelming. The project has made a concerted effort to respond to every request. This point will be discussed in greater detail under the heading of dissemination.

Table 3

Location, Level, Enrollment of Secondary Learning Disabilities Classes (1975-76 School Year)

District	Building	Grade Level	Type of Community	Total Class Enrollments	No. of Students Participating in Study
Abington	Glenside-Weldon	7 - 8	Suburban	13	10
Hatboro-Horsham	Keith Valley	8 - 9	Suburban	10	9
Pottstown	Middle Sch.	6 - 7	Rural	10	10
Souderton	Indian Valley	7 - 9	Rural	14	8
Springfield	Hillcrest	7 - 9	Suburban	16	12
Wissahickon	Middle Sch.	7 - 8	Suburban	14	10
Wissahickon	High Sch.	9 - 12	Suburban	9	4

Table 4

Distribution of Students by Grade Level

Grade	Enrollment	
	Number	Percentage
7	25	40
8	25	40
9	11	17
10	1	2
11	1	2

Note: Percentages have been rounded to the nearest whole number and consequently the total may not add up to exactly 100%.

6. Formal Research and Evaluation Findings

Formal evaluation of the project involved the direct assessment of academic growth for the students who participated in the program during the 1975-76 school year. In addition to assessment of academic gains, the students were administered an ancillary battery of tests which addressed certain process functions, physical skills, and vocational interests. These tests were utilized in an exploratory effort to determine salient characteristics of secondary-aged learning disabled students which might be important to an understanding of the students academic deficiencies. More specifically, the specific purposes of the testing were:

1. To measure the academic gains made by the students in those skill areas in which they received remedial instruction, namely reading and mathematics.

2. To assess the extent of the students' spelling skills and writing skills.

3. To survey students vocational interests.

4. To determine if process deficits typically manifested in young learning disabled children are apparent in the learning disabled adolescent.

5. To secure group data on the physical development of the learning disabled adolescent to determine if the deficiencies in gross motor skills often reported in the literature on the young learning disabled child are typical of the learning disabled adolescent.

The complete evaluation report, Learning Disabilities in the Secondary School: Student Progress and Characteristics, is appended (see Appendix A); however, the highlight of the report concerns the significant academic gains achieved by the students after one year of participation in the program.

In the area of reading comprehension, the mean gain was 1.66 years (N=50); the mean gain for the math concepts was 1.14 years (N=46); and the mean gain for math comprehension was 1.25 years (N=46). These mean gains in reading and mathematics achievement were gratifying; however, the reporting of mean scores masks the particularly impressive achievement of those students who excelled beyond this point. The growth of some of the students was indeed spectacular and the project staff was heartened by these cases of exceptional individual performance. It reaffirmed our belief that appropriate programming (intensive remedial academic training) can spell the difference between academic success and failure for adolescents with learning disabilities.

7. Project Outcomes

The outcomes of the project can be classified under one of two headings: services or products. Services include the operation of actual classroom programs for students and inservice offerings for teachers and school staff. Seven secondary learning disabilities classes were conducted during the 1975-76 school year; the classes served 82 students. Over the two years, a number of inservice programs were held: The symposium on learning disabilities in the secondary schools can be viewed as an inservice program, an end of year program was held at the close of the first and second project year, and inservice for the secondary teachers was held at the end of the first year in preparation for programs to be conducted during the 1975-76 school year. During the two-year period, L.D. staff responded to many requests for inservice at the local district level.

The products produced by the project include six documents and compilation of four documents (the information base) into a microfiche folder. The documents are described in greater detail in Section #II; copies are appended.

8. Implications of Project Results

The project results have, we believe, the following implications for special education personnel who work with adolescent populations:

1. The student outcomes which resulted from attendance in the project classes clearly indicate that special programming at the secondary level can have a significantly beneficial effect on academic deficiency of learning disabled adolescents. Some of our students were being helped for the first time despite long-standing histories of academic failure; clearly adolescence is not too late for intensive remedial education.

2. The results reaffirm the need for secondary programming; elementary programs will not, as some believe, eliminate the need for secondary-level programs. Our experience in this project coupled with our experience in elementary programs for the learning disabled, have shown us that, for some youngsters, learning disabilities will persist despite our best educational efforts. A portion of primary-aged learning disabled children will continue to need help throughout their educational programs, and the responsibility for the educator is to be sure that the needed services are available to them, i.e., special programs in our secondary schools.

3. Secondary learning disabled students can be identified and operational definition can be developed and applied.

4. The characteristics of the learning disabled is an important area for research and investigation, but investigations of process deficiencies may not yield the most fruitful results. Process dysfunctions commonly associated with young learning disabled children did not generally characterize secondary learning disabled students in our project classes.

The response to and results for the project's printed materials has been overwhelming. Obviously there is a critical need for further effort in the area of secondary learning disabilities. We can say without reservation that Montgomery County, Pennsylvania, is a leader in programming for the secondary learning disabled student.

9 and 10. Factors Relevant to Success and Short-Comings

An objective view of the weaknesses and strengths of this project is provided in ESEA Title III On-Site Evaluation Team Summary. Accordingly, sections of both the first and second year On-Site Evaluation Team Summary are included; the specific selections relative to strengths and weaknesses are presented in their entirety.

ESEA Title III On-Site Evaluation Team Summary
1974-1975

2. Please list the strengths of the project.

The strengths of this program are quite apparent and may be listed as follows:

1) An outstandingly competent administrator--the project director: with a capable staff.

2) A design of action that is logical but experimental with flexible parameter to meet the demands of a pragmatic system.

3) Dissemination plans that should give adequate exposure to findings.

4) Needs assessment plans appear quite functional but may need alteration if objectives are not answered in relatively definitive terms.

5) Literature search has made a good beginning in the right direction and should hold to the main objective with respect of the L. D. problems.

3. Please list any special problems or weaknesses of the project as observed by the team.

There seemed to be no special problems or weakness inherent in the proposal or in efforts to carry out its goals. One fact, however, has been evident, especially to the project staff, and that is the present ambiguity of guidelines for identifying learning disabled pre-adolescent and adolescent children. Perhaps a major goal of this research is the identification of criteria which will fill that need.

Early studies of needs assessment have revealed a serious lack of uniformity among school districts within the county in their measurement and pupil assessment procedures. These inequalities, unless corrected may make later evaluation of research procedures very difficult.

The staff appears to be aware of the need to establish boundaries for this project. The target for the research is "learning disabilities" and efforts should be restricted to the fulfillment of that goal alone.

ESEA Title III On-Site Evaluation Team Summary
1975-1976

2. Please list the strengths of the project.

   2) Unquestionably, the quality of the project materials disseminated is superior to any observed at other project sites. In terms of the value of the information presented, the manner in which it was researched, and the attractiveness of its form of presentation, it could well serve as a model for dissemenation of materials from other Title III projects.
   The esprit de corps of the total project team (director, associates, teachers and teaching assistants) was everywhere obvious and admirable.

The advantages to the students accruing from the one student/teacher, teacher assistant ratio are obvious and should readily provide the kind of improvement that such a program aspires to.

3. Please list any special problems or weaknesses of the project as observed by the team.

3) We agree with the project director that there are two weaknesses in the program:

(a) there is little or no parent input into the program, and

(b) while the program meets the academic needs of the students, their needs in terms of the world of work are not yet being met, in that there are no opportunities in vocational training provided by the program.

In addition to the specific supportive elements cited by the members of the ESEA evaluation teams, the continuing support of the project's LEA, namely the MCIU, deserves recognition. In many instances the MCIU has contributed significant resources to the furtherance of this project effort, e.g., staff time, funds for dissemination, activities not originally included in the project's plans, etc. It would be difficult to place an exact dollar amount on the contribution of the MCIU (beyond that indicated in the original proposal) or to adequately gauge the significance of the MCIU's support to the success of this project, but it has been considerable and has to be recognized as a significant factor in the success of this project.

11. Concrete Project Outputs

When this project began, one of the most urgent needs in the area of secondary learning disabilities was for a data base from which special educators could draw relevant information to assist them in developing services for these handicapped students. A well-developed literature on the topic of secondary learning disabilities simply did not exist. What little information was available was difficult to obtain as no concerted effort had been made to compile this information in a usable form. In addition, this area of inquiry being so new, we realized that one primary resource was professionals who had knowledge and expertise from actual involvement with secondary learning disabled students - though their efforts may not have been publicized in any way.

The project undertook to develop the data base on secondary learning disabilities. Over the course of two years, six project documents have been produced; this collection represents the most extensive information resource on secondary learning disabilities available anywhere in the country and represents a major accomplishment for the project. The documents are:

Learning Disabilities In The Secondary School*

This document is the outcome of a three-day conference on secondary learning disabilities sponsored by the Montgomery County Intermediate Unit (March 13, 14, 15, 1975). The document includes the transcription of daily meetings and prepared papers of the twelve panalists who gave presentations at the conference. The conference was attended by persons from all parts of the Commonwealth of Pennsylvania. The conference was designed to utilize the expertise of persons directly involved in programming for learning disabled adolescents, to make these individuals accessible to educators across the state, and to heighten awareness of this handicapped population.

Needs Assessment Survey: Final Report*

The Needs Assessment Survey represents a county-wide canvass of existing services for the learning disabled and a carefully planned investigation to determine the incidence of learning disabled students in our secondary school population.

The Needs Assessment revealed the level of services available for the learning disabled in the Montgomery County relative to the number of learning disabled elementary classes, number of elementary students enrolled, the number of secondary learning disabled classes, number of secondary students enrolled and the number of learning disabled students enrolled in private schools at both the elementary and secondary level. This information was provided both cumulatively and for each school district within the county.

The investigation to establish the incidence of learning disabilities in our secondary school population involved the screening of a carefully selected, randomized sample of sixth grade students (N-814). The specific details of the investigation, i.e., procedures, sample selection screening criteria, results, and conclusions are presented. Analysis of the data revealed that the population of students currently served in programs for the learning disabled did not exceed 3% in any of our 21 operating school districts and that elementary programs for the learning disabled out-numbered secondary level programs by a better than 2 to 1 ratio.

Learning Disabilities In The Secondary School: A Review of the Literature*

The review of the literature is a compilation of 161 articles on the topic of secondary learning disabilities. The articles were gleaned from a comprehensive search of 35 professional journals, a number of published conference proceedings, important indexes to current literature and research, computerized searches, and various additional meterials. For the readers convenience a summarization and complete biographic information is provided for each of the 161 relevant articles/studies included in the literature review.

Curricular Materials for Secondary Learning Disabilities Programs*

To assist teachers in the selection of worthwhile curricular materials for use with secondary-aged learning disabled pupils, a compilation of available materials was prepared. The many hundreds of individual materials which were found are organized under nine subject headings; each curricular item is catalogued by title, publisher, and copyrite date. The interest level and instructional level (when available) is indicated as is the actual content of the material.

The preparation of the Curricular Materials For Secondary Learning Disabilities Programs was a serendipitous outcome of the project in that the development of this particular document was not projected in the original project planning. However, when the need for such a resource became apparent, maximal utilization of project funds enabled us to undertake this additional commitment.

Learning Disabilities In The Secondary School: Student Progress And Characteristics

This report has two purposes: (1) to investigate several characteristics of the students enrolled in the MCIU secondary classes and to (2) determine the academic achievement of the students who participated in the program. To these ends, an extensive testing program was conducted during the 1975-76 school year for all student's enrolled in the project's learning disabilities classes. The specific procedural and methodological details are presented. The results of the testing program relative to both pupil characteristics and academic achievement are discussed. The data clearly demonstrate that our student population have severe deficits in many academic areas; however the data also document impressive academic gains following intensive remedial instruction.

Needs Assessment Survey: Phase Two Final Report

This Needs Assessment Survey represents a replication/modification of the earlier county-wide needs assessment. This second procedure was conducted within the parochial school sector while the initial survey upon which it is modeled was restricted to a public school population. This survey involved a sample of 381 eighth grade students. The methodology of the assessment are detailed and results are discussed and contrasted with the results of the initial needs assessment carried out in the public school sector.

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*The initial printing of each document was limited to 300 copies. In anticipation of requests in excess of our supply, the documents were reproduced on microfiche (a relatively inexpensive medium) in order to disseminate to a wider audience. Also, all project documents will be submitted to the ERIC system for distribution after our in-house supplies are exhausted.

12. Dissemination

Dissemination activities focused upon the distribution of documents produced by the project and the sharing of the project's wide secondary level program for the learning disabled with our local school districts. During the two years that the project was in existence, it produced the following documents:

1. Guidelines for the Development and Implementation of Secondary School Programs for Learning Disabled Youth.
2. Learning Disabilities in the Secondary School.
3. Needs Assessment Survey: Final Report.
4. Learning Disabilities in the Secondary School: A Review of the Literature.
5. Curricular Materials for Secondary Learning Disabilities Programs.
6. Needs Assessment Survey: Phase Two.
7. Learning Disabilities in the Secondary School: Student Progress and Characteristics.

The Needs Assessment Survey: Phase Two and the Report of Student Progress are second-year products which have just been completed. Dissemination of these documents will follow the same format as that of the earlier materials; but, as the project will be terminated just as these materials are completed, dissemination of the documents will be dependent upon the resources of the Montgomery County Intermediate Unit.

A number of dissemination vehicles were utilized to maximize the distribution of the project materials; these included inservice, direct mailings, and responding to individual requests. By far, the greater number of documents were distributed in response to individual requests which resulted from the advertisement of the materials to the general special education public. Organizations to which the materials were sent included Research and Informational Services For Education (RISE), Pennsylvania Research and Information Center for Special Education (PRISE), National Learning Resource Center of Pennsylvania (NLRCP), ERIC, National Learning Disabled Assistants Project, Massachusetts, as well as Council for Exceptional Children and Association for Children with Learning Disabilities convention presentations. These many organizations in turn served an informational function and many individuals became aware of our project materials through these agencies. Direct mailings initiated by the project were limited to all directors of special education within the state of Pennsylvania, certain individuals in the Department of Education at Harrisburg, and to the project directors of all Title VI-G projects which service secondary learning disabled youth. By far, most of dissemination of documents has been accomplished in response to incoming requests from individuals who have heard about the project and the availability of the materials. The response to the materials has been overwhelming and extremely gratifying. A partial list of persons who have received materials is attached. The list clearly indicates the outreach effect of this project to teachers, administrators, students, government officials, and parents in every part of the country. Dissemination activities are continuing and will be continued until the last copy of the last document is given away.

Inservice programs were restricted to Montgomery County as a direct service to our local school districts. At the inservice meetings, project materials were distributed and the program model for secondary learning disabled students was presented and discussed in the hope that the model would be adapted by some of our local school districts. If a district opted for our model of service, we could call upon the resources of the Intermediate Unit to provide supervision or consultation by I.U. learning disability program staff (Master Itinerant teachers) to assist local districts in the establishment of secondary learning disability programs.

13. Continuation of Project Activities After Cessation of Federal Funds

The primary project activity which warrants continuation after the termination of federal funding is classroom program operations. The project's secondary learning disability class program was never in jeopardy in that project monies were not used for the direct operation of classrooms. Rather the cost of the classroom programs was borne by the MCIU and the certain classes designated as project affiliates for the duration of the federal grant. Therefore, the secondary L.D. program has continued uninterrupted and the former project classes serve as model operations for the districts which we serve.

A second critical activity is that of dissemination. Dissemination vehicles included the development of specific documents, in-service, conference presentations, etc. To the extent possible, dissemination activities will be continued utilizing MCIU resources. The products developed by the project will be made available to the professional community by means of the ERIC information retrieval system.

14. Efforts by Other Agencies to Adopt or Adapt Project Activities

The project staff feels that an important index to the impact of this project on other agencies is the responsiveness of other professionals and organizations to the products developed. Our supply of printed materials were quickly depleted and the number and nature of the feedback letters which we received were very encouraging. Though it was beyond the scope of this project to determine the magnitude of its outreach effort other than to gather data on the agencies, schools, and individuals who requested and received project materials (a file of all requests for project materials has been maintained); we know that the materials have reached the individuals, agencies, and schools all over the country and are optimistic that the project has helped both professionals and children. Termination of the project after 2 years instead of 3 as originally projected precluded a more in-depth evaluation of the project's dissemination activity.

APPENDIX A

Learning Disabilities In The Secondary School: Student Progress And Characteristics

LEARNING DISABILITIES IN THE SECONDARY SCHOOL: STUDENT PROGRESS AND CHARACTERISTICS

Prepared by:

Marianne Price
Libby Goodman

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REPORT

This report is the final project evaluation for "Curricular Development for Secondary Learning Disabilities," a Title III project sponsored by the Montgomery County Intermediate Unit. The report is concerned with the academic achievement of those students who participate in seven secondary learning disabilities classes in which the curricular model developed by the project was utilized.

The purpose of the project was to provide intensive developmental/remedial instruction to learning disabled adolescents in an effort to significantly upgrade their skills in the areas of math and language arts. The data presented speak to this issue. In addition, descriptive data are presented which reveal the status of the students on various tests of physical ability, process skills, and vocational interests. It was felt that these areas were worthy of investigation because they might yield information important to educational programming.

The testing program was conducted during the 1975-76 school year for all secondary school students enrolled in the project's learning disabilities classes. The purpose of the testing program was:

1. to measure the academic gains made by the students in those skill areas in which they receive remedial instruction, namely, reading and mathematics,
2. to assess the extent of the students' spelling skills and writing skills,
3. to survey students' vocational interests,
4. to determine if process deficits typically manifested in learning disabled children are apparent in the learning disabled adolescent, and
5. to secure group data on the physical development of the learning disabled adolescent to determine if the deficiencies in gross motor skills often associated with the young learning disabled youngster are typical of the learning disabled adolescent.

Sample

A total of 86 students were enrolled in the Montgomery County Intermediate Unit (MCIU) secondary learning disabilities program during the 1975-76 school term. Sixty-three of these students participated in the testing program. Participation was contingent upon written parental/guardian consent. A letter which explained the purpose of the testing and included a permission form to be completed and returned to the Intermediate Unit was mailed to the parents/guardians of all students enrolled in the MCIU learning disabilities program. Parents/guardians who did not respond to the letter were contacted by telephone. Permission for testing was obtained for 73% of the students.

The learning disability classrooms which these students attended are located in seven suburban and rural school districts in Montgomery County (see Table 1). For the most part, these classes are housed in junior high schools. In fact, all students but two were seventh, eighth, and ninth graders (see Table 2). The average class enrollment was 12 students. Six students (approximately 10%) were black and 57 (approximately 90%) were white; there were 16 females and 47 males. Students' IQs ranged from 80 to 119. At the time of testing, subjects' ages ranged from 12 years, 6 months to 17 years, 5 months.

Table 1

Location, Level, Enrollment of Secondary Learning Disabilities Classes (1975-76 School Year)

District	Building	Grade Level	Type of Community	Total Class Enrollments	No. of Students Participating in Study
Abington	Glenside-Weldon	7 - 8	Suburban	13	10
Hatboro-Horsham	Keith Valley	8 - 9	Suburban	10	9
Pottstown	Middle Sch.	6 - 7	Rural	10	10
Souderton	Indian Valley	7 - 9	Rural	14	8
Springfield	Hillcrest	7 - 9	Suburban	16	12
Wissahickon	Middle Sch.	7 - 8	Suburban	14	10
Wissahickon	High Sch.	9 - 12	Suburban	9	4

Table 2

Distribution of Students by Grade Level

Grade	Enrollment	
	Number	Percentage
7	25	40
8	25	40
9	11	17
10	1	2
11	1	2

Note: Percentages have been rounded to the nearest whole number and consequently the total may not add up to exactly 100%.

Socioeconomic status as defined by the Duncan Occupational Scale was determined for 40 students whose fathers' occupations were known: 35% of these students were classified as low socioeconomic status, 15% as middle socioeconomic status, and 50% as high socioeconomic status.

Test Measures

The selection of the test battery was influenced by a number of factors. Ease of administration was an important consideration as the tests were to be administered by trained, but not certified individuals. The time required to administer the test battery was limited at the request of participating school districts to prevent too great a loss of instructional time for the students involved (the total test battery required approximately three hours per student). Test validity and reliability were also considered in the selection process. The majority of the tests selected were standardized measures. Nonstandardized measures were chosen if suitable standardized tests could not be found. Table 3 presents a list of the tests included in the test battery, a brief description of each test's intent and format, and the reason for each test's selection.

Table 3

Test Measures Used to Evaluate Secondary Learning Disabilities Students

Title	Publisher	Level	Description of Content	Format	Reason for Selection
Myklebust Picture Story Language Test	Grune and Stratton, Inc.	Ages 7 to 17	A developmental scale for written language intended to apprise normal and abnormal development of written language. The child is presented with a picture and asked to write a story about it. The story is analyzed in terms of length (Productivity), and correctness of expression (syntax). The results are reported in percentiles.	Group Test	Written language is typically not assessed by standardized achievement tests. The results of this test will have direct implications for curriculum planning in the area of language arts.
Temple Spelling Test	Temple University Psychology of Reading Department	1st Grade and up	An informal test of spelling composed of lists of graded words (1st-6th) which are presented orally to the students. The results indicate the level at which the child should receive spelling instruction.	Individual Test	Used to establish an instructional spelling level.
Stanford Achievement Test	Harcourt Brace Jovanovich, Inc.	Primary Intermediate Advanced	A standardized achievement test of basic skills. The results are reported as grade level scores. Tests are given only for those areas in which the student received remedial instruction.	Group Test	The test is used on a pre-post basis to assist program evaluation.

Table 3 (Continued)

Test Measures Used to Evaluate Secondary Learning Disabilities Students

Title	Publisher	Level	Description of Content	Format	Reason for Selection
Lincoln Diagnostic Spelling Test	Educational Records Bureau	Grades 2-12	A standardized test of spelling in which words are presented orally by the examiners. The norms are revised periodically. The results are reported as quartile rankings. They can be interpreted as follows: 1st quartile — student's scores fall into bottom quarter of the scores reported for his age level. 4th quartile — student's scores fall into top quarter of the scores reported for his age level, etc.	Group Test	We wished to assess the students' skills using a standardized instrument. Typically, such tests require the student to choose the correctly spelled form of a word from a list of 4 or 5 incorrect spellings. Our students do poorly with such a format. We want to see if a different format will result in better performance.
Detroit Tests of Learning Aptitude (selected subtests)	The Bobbs-Merrill Company	3 yrs. & up	The results are interpreted as mental age scores	Individual Test	These are skills with which younger learning disabled students typically have a great deal of difficulty. We wished to determine if they continue to be problem areas for the adolescent learn-disabled student.
Subtest 5 - Motor Speed and Precision			A test of fine motor skills. Consists of a sheet of circles graduated in size. Pupil mark Xs in as many circles as possible in a specified period of time.		

Table 3 (Continued)

Test Measures Used to Evaluate Secondary Learning Disabilities Students

Title	Publisher	Level	Description of Content	Format	Reason for Selection
Subtest 10 - Orientation			A test of basic concepts. Includes 42 questions that deal with concepts of time, size, and directions.		
Subtest 13 - Auditory Attention Span for Related Syllables			A test of auditory attention. Consists of a series of 43 sentences of increasing length which the examiner reads and the student repeats.		
Benton Revised Test of Visual Reception	The Psychological Corporation	Ages 8 & up	Designed to assess memory, perception, and visuomotor functions. Composed of designs which the student must copy from memory after a timed presentation. There are three forms of the test and four possible modes of presentation. The results are interpreted as pass and fail, depending on the total number of errors.	Individual Test	This test will be used to assess short-term memory.
Ohio Vocational Interest Survey	Harcourt Brace Jovanovich, Inc.	Grades 8-12	Gathers background information about occupational plans, school subject preferences, curriculum plans, vocational course interests, etc.	Group Test	The results will be used to assist students with educational and vocational planning.

Table 3 (Continued)

Test Measures Used to Evaluate Secondary Learning Disabilities Students

Title	Publisher	Level	Description of Content	Format	Reason for Selection
Youth Fitness Test	AAHPER Publications (American Alliance for Health, Physical Education, and Recreation)	Ages 10-17	A test of physical fitness officially adopted by the President's Council on Physical Fitness and Sports. Composed of seven subtests designed to measure various components of physical fitness. The results are reported as percentile rankings for each of the various subtests.	Group Test	The literature on learning disabled adolescents often describes them as being less well developed physically than their peers. These reports are typically based on clinical observations. We wished to determine if this, in fact, is the case.
Bender Gestalt Test of Visual Motor Integration	Grune and Stratton, Inc.	**Koppitz Norms** to age 12. Clinical assessment above age 12.	Designed to assess visual motor perception. Composed of nine designs which the student must copy. The results are reported as total number of errors.	Individual Test	The young learning disabled child often experiences difficulty in the area of visual motor functioning. We wished to determine if it continues to be a problem for the adolescent.

Procedure and Results

All tests were administered by trained and qualified employees of the Montgomery County Intermediate Unit. The testing was carried out during the months of April and May, 1976, with the exception of the intelligence testing which is a requirement for entrance into the program and the Stanford Achievement testing which is typically given on a yearly pretest/posttest basis. In all, a total of five group tests and four individual tests were given (see Table 3). The tests were administered according to the procedures outlined in their respective test manuals; however, slight modifications were made to two of the tests, the Myklebust Picture Story Language Test, and the Orientation Subtest from the Detroit Tests of Learning Aptitude. The stimulus picture used in the administration of the Myklebust Picture Story Language Test depicts a seven-year-old child playing with a dollhouse, hardly an appropriate theme for a secondary student. A photograph of a ninth grade student building a model ship was substituted. The Orientation Subtest (Detroit Tests of Learning Aptitude) contains five items which require the student to perform a gross motor activity. It was the opinion of the staff that secondary students would find these activities embarrassing as they represented elemental skills which would pose little, if any, difficulty for secondary-aged students. Therefore, these items were deleted from the subtest.

All tests but one were scored either by those persons who administered the tests or by the assistant project director. The one exception was the Ohio Vocational Interest Survey which was machine scored by the publisher of that test. Test results will be discussed as they relate to four major areas: (a) intellectual status, (b) process functioning, (c) academic achievement, and (d) vocational interests.

Intellectual Status. Intelligence testing is a requirement for placement in a learning disabilities class. All subjects in the sample were administered the WISC prior to acceptance into the program. Seventy-nine percent of the subjects were given the Revised WISC, the remainder were given the 1949 Edition. The results indicate that approximately 81% of the students had a full scale IQ of 90 or above. The mean verbal IQ was 93.96 while the mean performance IQ was 101. Seventy-three percent of the students in the sample had a verbal IQ of 90 or above; approximately 84% had a performance IQ of 90 or above. A breakdown of the IQ scores analyzed in terms of verbal and performance abilities is presented in Table 4.

Table 4

Distribution of Full Scale, Verbal, and Performance IQs for Secondary Learning Disabled Students

Range	Full Scale IQ		Verbal IQ		Performance IQ	
	N	%	N	%	N	%
70 - 79	0	0	1	2	1	2
80 - 89	12	19	16	25	9	14
90 - 99	28	44	30	48	19	30
100 - 109	18	29	15	24	19	30
110 - 119	5	8	1	2	11	17
120 - 129	0	0	0	0	4	6

	Full Scale IQ	Verbal IQ	Performance IQ
$\bar{X}$	96.74	93.96	101.00
σ	7.61	7.63	11.69

Note: All percentages have been rounded to the nearest whole number and consequently the total may not add up to exactly 100%.

Intelligence test results were also analyzed in terms of student performance on the individual subtests. Mean scaled scores and standard deviations for various subtests of the WISC are reported in Table 5. The mean scaled scores for the individual verbal subtests range from 8.271 to 9.7. The verbal subtests which presented the greatest difficulty for the students were Information and Arithmetic. Thirty-three percent of the students in the sample scored more than one standard deviation below the norm on the Information subtest; 33% scored more than one standard deviation below the norm on the Arithmetic subtest. Among the performance subtests, Block Design and Coding were the most difficult. The percentage of students scoring more than one standard deviation below the norm on the Block Design and Coding subtests was 21% and 32% respectively. Student performances on the WISC subtests is summarized in Table 5. For each subtest, the mean scaled score, the range of scaled scores, the standard deviation of scaled scores, and the number and percentage of students scoring more than one standard deviation below the norm are presented.

Table 5

Student Performances on WISC Subtests

Test	Mean of Scaled Scores	Range of Scaled Scores	Standard Dev. Scaled Scores	Students Scoring More Than One Standard Deviation Below Norm	
				N	%
Verbal Tests					
Information	8.5	5-13	2.088	21	33
Comprehension	9.7	5-14	2.177	7	11
Arithmetic	8.271	4-13	1.855	19	30
Similarities	9.864	5-14	2.403	10	16
Vocabulary	9.367	5-15	2.075	8	13
Digit Span	8.480	4-13	2.917	8	13
Performance Tests					
Picture Completion	10.746	6-17	2.844	8	13
Picture Arrangement	10.525	3-14	2.595	4	6
Block Design	9.763	3-14	2.569	13	21
Object Assembly	10.610	5-17	2.871	6	10
Coding	8.780	2-17	2.704	20	32

Note: Total Sample = 63

Process Tests

Visual motor-integration. Tasks requiring visual-motor integration typically present problems for the young learning disabled child. The purpose of assessing process functions was to determine if such tasks continue to present problems to the learning disabled adolescent. Two tests were administered: (1) the Benton Visual Retention Test, a test of visual-motor integration and visual memory, and (2) the Bender Test of Visual-Motor Integration. On the Benton, a student's performance is based on a comparison between his expected and actual score. According to the manual,

> An obtained score which is two points below the expected score may be considered to raise the question of a specific disability in visual memory or visuomotor function. An obtained score which is three or more points below the expected score may be considered to suggest such a disability. (p. 44)

In the sample of 63 students, 11% obtained scores that raise the question of specific disability and 17% obtained scores that suggest that such a disability is present.

On the Bender, the student's performance was assessed clinically since the Koppitz Scoring System does not provide norms for students above twelve years of age. Ninety-seven percent of the students performed adequately on the Bender. Three percent (2 students) did not.

Since the Bender and Benton tests are alike in that both assess visual-motor integration by requiring students to copy designs, a comparison of students' performances on the two tests was made. The Benton proved to be the more difficult of the two tests for the secondary learning disabled students, possibly because it taps the added dimension of visual memory. Eleven students' performances were inadequate on the Benton while only two students' performances were inadequate on the Bender. Only one student performed poorly on both the Benton and the Bender. These results are summarized in Table 6.

Table 6

Comparison of Bender and Benton Test Performance for a Sample of Learning Disabled Adolescents

Bender Performance				Benton Performance				Combined Test Performance					
Adequate		Inadequate		Adequate		Inadequate		Adequate Both		Inadequate One		Inadequate Both	
N	%	N	%	N	%	N	%	N	%	N	%	N	%
61	97	2	3	52	83	11	17	50	80	12	19	1	2

Note: Percentages have been rounded to the nearest whole number and consequently the total may not add up to 100%.

Detroit Tests of Learning Aptitude. The Detroit Tests of Learning Aptitude is a series of tests of process abilities widely used in the diagnosis of learning disabilities in students in the elementary grades; however these tests are also normed for secondary aged students. Three of the tests were selected for inclusion in this test battery: (1) Motor Speed and Precision, (2) Orientation, and (3) Auditory Attention Span for Related Syllables.

The Motor Speed and Precision Test (Test 5) requires the student to mark as many Xs as possible inside a series of circles of decreasing size in a specified amount of time. It is a measure of fine motor skills. This particular task and other similar tasks involving fine motor skills often present great difficulty for the pre-adolescent learning disabled youngster. The purpose in giving the test to adolescent learning disabled students was to determine if the task would prove to be a difficult one for them as well. The results indicate that while the task was not a difficult one for the majority of secondary learning disabled students in the sample, it did pose problems for a significant minority. Seventy-three percent of the students performed at or above the age expectancy level; 27% performed two or more years below their age expectancy level (see Table 7). Obviously deficiencies in fine motor skills do persist into the adolescent years for some learning disabled students.

The Orientation Test (Test 10) measures the student's knowledge of concepts of direction, time, and size. A lack of understanding of these concepts is a common problem among young learning disabled children that may be a contributing factor to some youngsters' inability to adequately comprehend the written and spoken word and to master certain arithmetical skills. This subtest was given to determine if confusion centering around these concepts persists into adolescence. Fifty-seven percent of the students in the sample scored two or more years below their age expectancy level. The remainder performed at or above the expectancy level (see Table 7). The results suggest that simple concepts of direction, time and size are an enigma to many secondary-aged learning disabled adolescents. The manner in which this disability affects performance bears further investigation.

The Auditory Attention Span for Related Syllables (Test 13) was the third test administered from the Detroit. This test consists of a series of 43 sentences which the examiner reads and the student repeats. It is a test of the student's ability to immediately recall spoken sentences and repeat them accurately. The results clearly indicate that this type of task was an overwhelmingly difficult one for the students in this sample. The results clearly indicate that ninety-five percent of the students performed at a level two or more years below their age expectancy; 5% performed at the expected level (see Table 7).

Table 7

Students' Performance on Selected Detroit Subtests

Students' Berformance Compared to Age Expectancy	Motor Speed		Orientation		Aud. Attention	
	N	%	N	%	N	%
2 or more years above expected level	12	19	0	0	0	0
At expected level (plus or minus 1 year	34	54	27	43	3	5
2 or more years below expected level	17	27	36	57	52	95

Note: Percentages have been rounded to the nearest whole number and consequently the total may not be exactly 100%.

It is apparent that the tasks involved in some of the process tests presented no difficulty for most of the secondary learning disabled students in this sample—i.e., tasks of visual-motor integration and motor speed and accuracy. Other tasks, for example those involving auditory attention and temporal and spatial relations, proved to be extremely difficult for many of the secondary students. While this comparison is interesting, the primary question is whether or not process deficits affect the student's academic achievement. To get at that question, a correlation matrix was constructed to determine the degree of relationship between students' performance on tests of academic achievement and their performance on tests of process functioning. These results will be discussed in greater detail in a succeeding section of this report.

Academic Tests

The instructional program of the Montgomery County Intermediate Unit Secondary Learning Disabilities Program in which the students in this sample participated stresses the acquisition of basic skills in the areas of reading, mathematics, language, and spelling. Core curricula for each of these areas are divided into units of instruction. Each student receives both pre- and posttests for each unit. The pretests tell where within a given instructional unit, and prior to instruction therein, a student's instructional needs are strongest and when previous learning and achievement have made instructional requirements minimal. In posttesting, a score (criterion) of 80% correct indicates "mastery" of that unit, unless examination of test results and teacher/supervisor knowledge of other data and observations indicate specific weaknesses that require attention despite the criterion of 80% being reached. If criterion is achieved, and there are specific weaknesses indicated, the student proceeds to the next instructional unit in the course of instruction. If the criterion is not achieved or specific weaknesses are apparent, the student is reinstructed in these skills until mastery of the unit is achieved. Therefore, while all students receive instruction in the same core curricula, each student proceeds at his own rate.

Tests of academic skills were administered to assess the effectiveness of the instructional program of the Montgomery County Intermediate

Unit Secondary Learning Disabilities Program. The purpose of the evaluation carried out by this project was to: (1) determine the overall levels of mastery of secondary learning disabled students in reading and mathematics prior to and following instructional intervention, and (2) to assess the students' academic status with respect to written language skills and spelling skills. Accordingly, tests of achievement were administered in the areas of reading, mathematics, spelling, and written language. The results of these tests are discussed below.

Spelling. The Temple Informal Spelling Inventory was administered for the purpose of determining each student's instructional spelling level. The test consists of lists of words graded according to level of difficulty. The instructional spelling level is the level at which the student spells 75% or more of the words correctly. In taking this test, the student writes a word after the examiner has repeated the word, read it in a sentence, and repeated it again. The interpretation of results is based on a comparison of actual and expected performance. The instructional spelling level of each student was compared to his grade placement (expected level of performance) and the degree of deficiency was determined. The results reported in Table 8 indicate that 84% of the students had an instructional spelling level that was three or more years below grade level.

Table 8

Temple Informal Spelling Inventory

Instructional Spelling Levels - Compared to Grade Expectancy

Spelling Performance	Students N	Students %
Above grade level	0	0
On grade level	1	2
1-2 years below grade level	9	15
3-4 years below grade level	26	43
5-6 years below grade level	25	41

Note: Percentages have been rounded to the nearest whole number and consequently the total may not add up to exactly 100%.

The Lincoln Spelling Test, a norm-referenced test, was administered to all of the learning disabled students in the Montgomery County Intermediate Unit Learning Disabilities Program. It was felt that a standardized spelling test in contrast to an informal assessment instrument might yield more accurate instructional information than the informal spelling test. The Lincoln was chosen over other standardized spelling tests because of its format which requires the student to write the words, rather than the approach typically used in a standardized test which requires the student to select the correct spelling of a word from among three or four misspellings of the word. The test consists of a list of 100 words arranged in cycles corresponding to nine categories of spelling rules. The words are not arranged in order of difficulty. All of the words must be presented to every student. There is no time limit. The test can be interpreted in two ways. The student's performance can be analyzed in terms of the type of errors he makes and this information can be used in developing educational prescriptions. In addition, the test provides a set of norms which report student performance in terms of quartile rankings. The quartile scores provide some information for comparing the learning disabled students as a group to their nonhandicapped peers in terms of spelling skills. Norms for this test are only available for 1964-1970. All students in the sample, with one exception, placed in the first (lowest) quartile. Regarding the utility of standardized versus the informal spelling assessment—i.e., the Lincoln versus the Temple, the Lincoln was of little educational value for this group. All 100 words had to be given to each student in order of difficulty. Because the students were working at a frustration level throughout most of the test, the test took an inordinate amount of time to administer. Some students appeared to "give up" soon after the testing had begun—as it became obvious that this was a task at which they could not succeed. The problem combined with the problem of obtaining recent norms make it very unlikely that the Montgomery County Secondary Learning Disabilities Program will use the Lincoln Spelling Test again.

The results of both the Temple Informal Spelling Inventory and the Lincoln Spelling Test attest to the difficulties that secondary learning disabled students encounter in the spelling area. They are not surprising. If one considers that reading proficiency is generally considered a prerequisite for spelling proficiency, but they do underscore the need for a strong remedial spelling component in a secondary learning disabilities program.

The Picture Story Language Test (Myklebust) was given as a measure of written language skills. The students were asked to write a story about a stimulus picture. (The project staff felt that the stimulus picture included in the test was inappropriate for secondary students and substituted one that was more suitable.) In accordance with the test directions, each student was given as much time as needed to write his or her story. Performance was evaluated along four of the five dimensions incorporated in this test including: (1) total number of words, (2) total number of sentences, (3) average amount of words per sentence, and (4) syntax which is a measure of the student's ability to apply rules of capitalization, punctuation, and word usage. A fifth dimension, an abstract-concrete scale of the quality of the content was deleted. This scale was not used because the scoring procedure for this dimension requires at least two rates, but has very low inter-rater reliability.

The results of the testing indicate that the learning disabled students in this sample are markedly deficient in the four dimensions in which their performance was assessed. Eighty-eight percent of the students scored below the 50th percentile on Total Words, 53% below the 50th percentile on Total Sentences, 92% below the 50th percentile on Words per Sentence and 86% below the 50th percentile on Syntax Quotients (see Table 9). These results are not unexpected; they verify classroom teachers' observations and assessment of their students' writing skills. They also emphasize the fact that the learning disabled student may continue to have difficulties with writing skills beyond the point at which he or she has successfully mastered the basic reading skills. For this reason, we recognize the necessity for including written language skills in the learning disabilities program at the secondary level. This component of the remedial program should include direct instruction in the mechanics of punctuation, word usage, etc., ample opportunity to apply these skills through written assignments, and direct feedback on performance should be provided.

Table 9

Students' Performance on Myklebust

Percentile Ranges	Total Words		Total Sentences		Words per Sentence		Syntax Quotient	
	N	%	N	%	N	%	N	%
0-25	41	69	21	36	47	80	42	71
26-50	12	20	10	17	7	12	10	17
51-75	3	5	18	31	2	3	3	5
76-100	4	5	10	17	3	5	4	7

Note: Percentages have been rounded to the nearest whole number and consequently may total more than 100%.

Reading and Arithmetic. The Stanford Achievement Test was given in September and May of the 1975-76 school year as a pre-post measure of student academic gains. Mean gain scores were computed for three subtests: Reading Comprehension, Math Concepts, and Math Computation. The mean gain on the test of Reading Comprehension was 1.66 years. Thirty-four percent of the students made less than one year's progress; 66% made from one year to more than three years' progress. On the test of Math Concepts, the mean gain was 1.14 years with 46% of the students making less than one year's progress and 54% making from one year to more than three years' progress. Finally, the mean gain on the test of Math Computation was 1.25 years. Forty-three percent of the students made less than a year's progress; 57% progress from one to three or more years.

These results affirm the effectiveness of the instructional program that is used in the Montgomery County Intermediate Unit secondary learning disabilities classes. The gains are especially impressive if one considers the fact that "compensatory programs generally deal with a population gaining from four to seven months in a 10-month instructional year. If a treatment raises that gain to an average of 10 months... the additional gain can be attributed to the treatment with a reasonable degree of confidence" (Rapp and Haggart, 1973). The mean gain was more than 10 months (an instructional year) in all areas in which pre and post measures were taken—Reading Comprehension, Math Concepts, and Math Computation. Furthermore, the majority of students made one or more years' gain in each area (see Table 10).

Table 10

Stanford Achievement Test

Pupil Performance Mean Gain Scores

	Reading Comprehension	Math Concepts	Math Computation
Mean	1.66	1.14	1.25
Standard Deviation	1.44	1.47	1.65
Number*	50	46	46
		Progress	
	%	%	%
Less than one year	34	46	43
1.0 - 1.9 years	32	26	24
2.0 - 2.9 years	14	20	17
3.0 years plus	20	8	16

*The discrepancy between the number of students taking the reading and math tests exists because those students who receive instruction in only one area are tested in that area only.

Process Deficits and Academic Functioning

Both process tests and academic tests were administered to the secondary learning disabled students. The purpose for giving the process tests was to determine if some of the problems typically associated with the young learning disabled child, e.g., poor visual-motor integration, short attention span, and poor directionality—are characteristic of the learning disabled adolescent as well. Academic tests were given to assess the effectiveness of the instructional program. The results of process and academic testing have been presented and discussed.

An additional question of importance is whether or not there is a relationship between process deficits and academic performance. A correlation matrix was constructed to determine the relationships among the process and academic test scores and to draw some inferences about the behaviors that these relationships may represent. Although the students as a group performed very poorly on some of the process tests and very well on others, there were no significant correlations between any of the process test scores and the academic test scores thus indicating no apparent relationships.

Vocational Interest Survey

The Ohio Vocational Interest Survey was administered to 33 of the eighth and ninth grade students in the sample. This interest survey is designed to assist students in their educational and vocational planning. In addition to serving this purpose, the results of the survey also helped the project staff to find out where students' interests lie in terms of high school and post-high school educational programming, and to determine if students' high school and post-high school plans were realistic in terms of their abilities.

The Ohio Vocational Interest Survey is divided into two sections. The Student Information Questionnaire gathers background information about the student's occupational plans, school subject preferences, curriculum plans, post-high school plans, and vocational course interests. The Interest Inventory which is comprised of 280 work activity items, profiles each student's interest in terms of 24 scales which represent the entire spectrum of occupations as outlined in the Dictionary of Occupational Titles.

On the Survey of Occupational Plans, students were asked to indicate a first and second choice among 24 occupational categories. The occupation selected most frequently as a first choice was "crafts" with 30% of the students indicating an interest in this area. "Machine work" and "artistic work" were the two categories selected most frequently as a second choice. The complete results of the Survey of Occupational Plans are summarized in Table 11.

Table 11

Survey of Occupational Plans

		First Choice		Second Choice	
		N	%	N	%
1.	Manual Work	0	0	4	12
2.	Machine Work	2	6	5	15
3.	Personal Service	1	3	1	3
4.	Care People-Animals	1	3	0	0
5.	Clerical Work	1	3	0	0
6.	Inspect-Testing	0	0	0	0
7.	Crafts	10	30	2	6
8.	Customer Service	0	0	0	0
9.	Nursing	1	3	1	3
10.	Skilled Per. Serv.	1	3	1	3
11.	Training	1	3	0	0
12.	Literary	1	3	1	3
13.	Numerical	0	0	1	3
14.	Appraisal	0	0	0	0
15.	Agriculture	2	6	0	0
16.	Applied Tech.	2	6	2	6
17.	Promotion-Comm.	0	0	3	9
18.	Management	0	0	1	3
19.	Artistic	2	6	5	15
20.	Sales Represent.	0	0	0	0
21.	Music	2	6	2	6
22.	Entertainment	4	12	1	3
23.	Teach-Counsel-Soc. Work	1	3	2	6
24.	Medical	0	0	0	0
	OMITS	1	3	1	3

Note: Percentages have been rounded to the nearest whole number and consequently the total may not add up to exactly 100%.

Students were also asked to indicate their best liked subjects on a first and second choice basis. Art was the subject area most frequently selected as both a first and second choice. The complete results of the Survey of Best Liked Subjects are reported in Table 12.

Table 12

Survey of Best Liked Subjects

Best Liked Subject	First Choice		Second Choice	
	N	%	N	%
1. Mathematics	4	12	3	9
2. English	1	3	3	9
3. Social Studies	6	18	2	6
4. Science	4	12	5	15
5. Foreign Languages	2	6	0	0
6. Music	2	6	4	12
7. Art	12	36	14	42
OMITS	2	6	2	6

Note: Percentages have been rounded to the nearest whole number and consequently the total may not add up to exactly 100%.

On the High School Program Survey, students were asked in what type of high school program they would like to be enrolled. Forty-two percent of the students indicated that they wanted to enroll in a vocational-technical program and 30% expressed interest in a college preparatory program. Three percent did not respond to the item and the choices of the remaining 25% were distributed among business-commercial, general, and other programs (see Table 13).

Table 13

High School Program Survey

High School Program	N	%
1. College Preparatory	10	30
2. Business-Commercial	2	6
3. Vocational-Technical	14	42
4. General	3	9
5. Other	3	3
OMITS	1	3

Note: Percentages have been rounded to the nearest whole number and consequently the total may not add up to exactly 100%.

Interestingly, a number of students indicated an intention to enroll in the college preparatory program. We know, of course, that some learning disabled students are able to successfully complete a regular college educational program. In addition to the traditional programs offered, there are now several colleges that are providing special programs specifically designed to accommodate the needs of the learning disabled student; however, these colleges are highly selective and as far as learning disabled students are concerned, they tend to limit admission to those who have above average ability, i.e., students for whom the prognosis for academic success is greatest. While a college education should not be ruled out for the learning disabled student, he will certainly require guidance in determining whether or not a college education is a realistic goal.

On the Survey of Post High School Plans, the student was asked if he/she plans to extend his/her education beyond high school and if so, to indicate the type of post-high school educational program that he/she would prefer. Thirty percent of the students were undecided. This response was predictable for this sample of students since it included young adolescents (eighth and ninth grades) many of whom have probably given little thought to what they will do after high school (see Table 14).

Table 14

Survey of Post-High School Plans

Post-High School Plans	N	%
1. Voc.-Tech. School	4	12
2. Business School	1	3
3. Nursing School	0	0
4. Junior College, etc.	2	6
5. College, University	5	15
6. Military	3	9
7. Apprenticeship	5	15
8. None	2	6
9. Undecided	10	30
OMITS	1	3

Note: Percentages have been rounded to the nearest whole number and consequently the total may not add up to exactly 100%.

The students were also asked whether or not they were interested in a vocational program. Fifteen percent indicated that they were already enrolled in such a program, 73% said they were not enrolled but were interested in finding out more about vocational programs, 9% expressed no interest, and 3% did not respond to this item. The fact that an overwhelming majority of the secondary learning disabled students indicated interest in learning more about vocational programs points to the need for making this type of information available to them.

Finally, the survey asked the students to select from among 24 vocational programs the one he/she would like to take. Students were asked to indicate both a first and second choice. The vocational program most frequently selected as a first choice was "mechanics." "Auto body repair" was the most frequently chosen second choice (see Table 15).

Table 15

Vocational Choice Program

Program	First Choice		Second Choice	
	N	%	N	%
1. Gen. Agriculture	0	0	0	0
2. Forestry, etc.	3	9	0	0
3. Office Practices	0	0	0	0
4. Secretarial	0	0	1	3
5. Data Processing	0	0	1	3
6. Bookkeeping	1	3	0	0
7. Distributive Ed.	0	0	0	0
8. Food Services, etc.	2	6	1	3
9. Practical Nursing	1	3	0	0
10. Dental Asst., etc.	1	3	0	0
11. Home Economics	0	0	0	0
12. Auto Body Repair	1	3	9	27
13. Mechanics	6	18	3	9

(To be continued)

Table 15 (Continued)

Vocational Choice Program

Program	First Choice N	First Choice %	Second Choice N	Second Choice %
14. Building Trades	2	6	0	0
15. Printing, etc.	0	0	1	3
16. Commercial	1	3	1	3
17. Cosmetology	2	6	0	0
18. Drafting	2	6	0	0
19. Machine Shop	1	3	1	3
20. Sheet Metal, etc.	3	9	3	9
21. Electronics	3	9	2	6
22. Appliance Repair	0	0	0	0
23. Tailoring, etc.	0	0	1	3
24. Undecided	0	0	4	12
OMITS	4	12	5	15

Note: Percentages have been rounded to the nearest whole number and consequently the total may not add up to exactly 100%.

Physical Fitness

Seven subtests of the 1976 edition of the Youth Fitness Test, the only physical fitness test for which there are national norms, were administered to assess the students' physical fitness. Young learning disabled children are often reported to be clumsier, less well coordinated, and generally not as physically fit as their nonhandicapped peers. The Youth Fitness Test was given to determine if this was generally true of the learning disabled adolescent as well. The reresults for each subtest were tabulated in terms of the percentage of students whose scores placed them between the 0-25th percentiles, the 26-50th percentiles, the 51-75th percentiles, and the 76-100th percentiles. In general, the results indicate that within this atypical population, there is a normal range of performance as far as the various tests of physical fitness were concerned. Thus the learning disabled adolescents, in this sample at least, do not appear to be any less physically fit than their nonhandicapped peers and as a group they do not exhibit the gross motor deficits typically associated with the young learning disabled child.

Table 16

Youth Fitness Test (AAHPER)

Subtest	Percentile Range		Students N	Students %
Pull-ups (boys)	0-25		10	19
Flexed Arm Hang (girls)	26-50		18	33
	51-75		8	15
	76-100		18	33
		Total	54	
Sit-ups	0-25		12	21
	26-50		13	23
	51-75		5	9
	76-100		27	47
		Total	57	
Shuttle Run	0-25		30	53
	26-50		10	18
	51-75		12	21
	76-100		5	9
		Total	57	
Fifty-Yard Dash	0-25		25	45
	26-50		13	23
	51-75		13	23
	76-100		5	9
		Total	56	
Walk-Run	0-25		25	45
	26-50		13	24
	51-75		8	15
	76-100		9	16
		Total	55	

(To be continued)

Table 16 (Continued)

Youth Fitness Test (AAHPER)

Subtest	Percentile Range		Students	
			N	%
Standing Long Jump	0-25		14	24
	26-50		20	35
	51-75		10	17
	76-100		14	24
		Total	58	

Note: Percentages have been rounded to the nearest whole number and consequently may not total exactly 100%.

Discussion of Results

The data reveals that the learning disabled students in this sample have severe deficits in many areas of academic skills. In addition to general deficiencies in reading and mathematics, spelling and specific written language skills pose great difficulty for these students. However, the results show that given an intensive remedial academic program, the students are able to make impressive academic gains in reading and mathematics.

Unfortunately the pre-post assessment strategy only involved reading comprehension and math concepts and computation. Clearly there is a need to incorporate assessment of written communication skills into the testing program as well.

The data also reveals that while the tasks involved in some of the process tests presented no difficulty for most of the secondary learning disabled students in the sample, i.e. tasks of visual motor integration and motor speed and accuracy, other tasks, for example those involving auditory attention and temporal and spatial relations, proved to be extremely difficult for the majority of students. Although a correlation matrix indicated no apparent relationship between process deficits and academic performance this is clearly an area that bears further investigation.

On the vocational interest survey, the students expressed a strong interest in enrolling in vocational-technical programs in high school. A significant number of students also indicated the desire to pursue a college preparatory program. While we believe that numerous curricular options, including vocational-technical and college preparatory programs, should be made available to the learning disabled adolescent, we strongly recommend that the decision process involve career counseling based on a student interests and aptitudes. Where it appears that a student could perform successfully in a particular program, e.g. a vocational-technical program, with supportive services, they should be made available.

Finally, the results of the physical fitness tests indicate that within this atypical population, there is a normal range of performance. Thus, the learning disabled adolescents appear to be as physically fit as their nonhandicapped peers.

References

Rapp, M. L., & Haggart, S. W. Idiographic analysis of achievement measures. Educational Technology, 1973, 23-26.

Appendix A

Demographic Information

Student Number	Grade	Race	Sex	Birth Date	Age at Testing (months)	Father's Occupation	Duncan SES	Duncan Decile
101	8	C	M	2-8-62	170	Printer	31	6
102	8	C	M	7-26-62	164	Chemical Eng.	90	9
103	7	C	M	4-28-63	155	Owner of Joke Shop	47	7
104	7	C	M	12-30-62	159	Construction Worker	07	1
105	8	C	M	8-22-62	163	Lab Technician	62	8
106	7	C	M	4-24-61	179	Maintenance-Town Park Dept.	11	1
107	7	N	M	10-14-63	150	Unknown	-	-
108	7	C	M	4-20-63	155	Photographer	50	8
109	8	C	M	8-6-61	176	Asst. SalesMgr.	59	8
110	8	C	M	9-8-61	175	Janitor	09	1
201	7	C	M	12-15-62	160	Bell Tel. Installer	49	7
202	8	C	F	9-18-61	174	Accountant	78	9
203	7	C	M	4-3-63	156	Unknown	-	-
204	7	N	F	12-17-62	159	Shipping Clerk	22	5
205	8	C	M	2-3-61	182	Father dead Mother School Nurse	46	7
206	8	C	M	8-20-62	163	Plumber	34	6
207	7	C	F	3-15-63	157	Salesman/ Manufacture	66	9
208	7	C	F	3-24-63	156	Landscaper (step-father)	11	1
209	8	C	F	2-3-61	182	Roofer	15	3
210	7	C	F	6-30-62	165	Truck Driver	15	3
211	9	C	F	5-11-60	191	Unknown	-	-
212	9	C	F	9-24-60	186	Bell Tel.Oper.	45	3
301	8	C	M	12-26-61	173	Synthane Taylor Co.	-	-
302	8	C	M	10-8-62	162	Unknown	-	-
303	8	C	F	3-2-61	181	Longacres Poultry Dressing	-	-
304	7	C	M	12-10-62	160	Hatfield Packing	-	-
305	8	C	M	12-20-61	171	Merck, Sharp & Dohme	-	-
306	9	C	M	3-31-60	192	North Penn Hide	-	-
307	9	C	M	6-9-61	177	Diamond Glass	-	-
308	8	C	F	11-2-62	161	New father - Mother unemployed	-	-
401	9	C	M	11-26-60	184	Mgr. A & P Dairy	62	8
402	8	C	M	11-23-62	160	Gas Sta. Owner	31	5
403	9	C	M	8-22-61	175	Truck Driver Upper Dublin Schl.	15	3
404	9	C	M	7-10-61	177	Electrical Assembler	14	2

Student Number	Grade	Race	Sex	Birth Date	Age at Testing (months)	Father's Occupation	Duncan SES	Duncan Decile
405	8	C	M	11-25-62	160	Owner Paint Store	61	8
406	9	C	F	11-14-61	173	Unemployed	-	-
407	9	C	M	11-5-60	185	Custodian - Woolco	09	1
408	8	C	F	3-22-62	168	Draftsman	67	9
409	8	C	M	5-20-62	166	Manager - Hurst Performance	79	9
501	7	C	M	4-22-63	155	Assembly line Firestone	12	1
502	7	C	M	6-4-62	166	Maintenance-AMC Vending Machines	-	-
503	7	C	F	6-16-63	154	Mechanic	25	5
504	7	N	M	9-16-62	151	Cafeteria - Pennjurst	11	1
505	7	N	F	5-24-63	154	Plant Super.	49	7
506	7	C	M	9-14-63	151	Personnel Dir. KIWI	84	9
507	7	C	F	9-4-63	151	No father-Mother on welfare	-	-
508	7	C	M	9-13-62	163	Insurance Agt.	66	9
509	7	C	M	11-10-63	149	On welfare	-	-
510	7	C	M	2-25-62	157	Part-time Beautician (mother)	17	3
601	8	N	M	8-9-62	164	Sanitation Eng.	11	1
602	7	C	M	6-8-62	166	Bookkeeper	51	8
603	8	C	M	7-2-61	177	(Student is ward of Catholic Church)	-	-
604	7	C	M	9-26-62	162	Mfg. Rep.	47	7
605	7	N	F	4-4-62	168	Unknown	-	-
606	8	C	M	10-16-61	174	Acme Supermkt.	-	-
607	8	C	M	5-9-60	191	(Student is ward of Catholic Church)	-	-
608	8	C	M	9-18-61	174	Bell Tel.	-	-
609	8	C	M	9-7-61	175	Chas.Myers Co.	-	-
610	7	C	M	12-24-62	159	Unknown	-	-
701	9	C	M	5-12-61	179	No father	-	-
702	10	C	M	2-1-60	194	Exec. of N.Y. Bailing Co.	64	8
703	11	C	M	11-15-58	209	Carpenter	19	4
704	9	C	M	8-1-61	176	Engineer	87	9

Appendix B

Scaled Scores, Wechsler Intelligence Scale for Children

WISC

Student Number	WISC Norms (Revised or Old)	Verbal IQ	Performance IQ	Full Scale IQ	Information	Comp.	Arith.	Sim.	Voc.	Digit Span
101	R	88	105	96	-	-	7	9	10	4
102	R	96	91	92	10	8	10	10	9	10
103	0	91	99	94	9	7	9	9	9	6
104	R	92	118	104	5	11	10	7	11	12
105	0	90	115	101	8	8	10	8	8	7
106	R	91	98	93	6	11	7	9	10	-
107	R	88	108	97	7	10	8	8	5	11
108	R	92	87	89	8	9	10	10	7	-
109	R	74	95	83	-	-	-	-	3	4
110	R	102	111	106	11	8	11	14	8	6
201	0	109	92	101	11	16	9	9	12	-
202	R	101	75	87	9	13	7	12	10	-
203	R	98	91	94	9	9	10	10	11	-
204	0	97	89	93	9	8	8	6	9	-
205	R	88	86	86	7	10	8	7	9	-
206	0	96	99	97	10	13	6	7	11	-
207	R	85	82	85	7	9	8	9	9	-
208	R	86	105	94	6	9	8	6	10	-
209	R	87	95	90	6	6	8	6	9	-
210	R	85	108	95	7	9	8	5	9	-
211	R	80	106	91	7	7	4	9	7	-
212	R	101	87	93	9	9	7	15	11	-
301	R	102	114	108	13	11	4	13	11	4
302	R	101	120	110	13	8	8	10	12	10
303	R	91	87	88	6	9	10	10	8	9
304	R	84	104	92	-	-	-	-	-	-
305	R	96	118	106	10	10	8	11	8	13
306	R	97	118	107	10	13	8	9	8	-
307	R	92	100	95	9	9	10	8	8	-
308	R	113	86	100	13	11	9	14	14	6
401	0	82	96	88	6	5	6	13	8	5
402	R	103	92	98	11	-	8	-	13	-
403	R	111	104	108	13	11	7	13	15	-
404	0	82	107	93	8	6	9	4	7	9
405	0	91	114	102	9	-	7	-	10	-
406	0	91	124	107	9	9	5	12	8	9
407	0	91	80	85	5	9	13	8	5	11
408	0	92	101	96	7	8	7	11	11	9
409	R	102	124	113	11	11	6	12	12	10
501	R	98	92	95	8	11	10	10	10	-
502	R	103	120	112	11	11	7	13	11	-
503	R	105	115	110	11	10	8	12	13	-
504	R	92	95	92	9	6	10	10	9	-
505	R	97	104	100	6	12	9	11	10	-
506	R	97	102	100	10	12	6	10	10	-

Student Number	WISC Norms (Revised or Old)	Verbal IQ	Performance IQ	Full Scale IQ	Information	Comp.	Arith.	Sim.	Voc.	Digit Span
101	R	88	105	96	-	-	7	9	10	4
102	R	96	91	92	10	8	10	10	9	10
103	O	91	99	94	9	7	9	9	9	6
104	R	92	118	104	5	11	10	7	11	12
105	O	90	115	101	8	8	10	8	8	7
106	R	91	98	93	6	11	7	9	10	-
107	R	88	108	97	7	10	8	8	5	11
108	R	92	87	89	8	9	10	10	7	-
109	R	74	95	83	-	-	-	-	3	4
110	R	102	111	106	11	8	11	14	8	6
201	O	109	92	101	11	16	9	9	12	-
202	R	101	75	87	9	13	7	12	10	-
203	R	98	91	94	9	9	10	10	11	-
204	O	97	89	93	9	8	8	6	9	-
205	R	88	86	86	7	10	8	7	9	-
206	O	96	99	97	10	13	6	7	11	-
207	R	85	82	85	7	9	8	9	9	-
208	R	86	105	94	6	9	8	6	10	-
209	R	87	95	90	6	6	8	6	9	-
210	R	85	108	95	7	9	8	5	9	-
211	R	80	106	91	7	7	4	9	7	-
212	R	101	87	93	9	9	7	15	11	-
301	R	102	114	108	13	11	4	13	11	4
302	R	101	120	110	13	8	8	10	12	10
303	R	91	87	88	6	9	10	10	8	9
304	R	84	104	92	-	-	-	-	-	-
305	R	96	118	106	10	10	8	11	8	13
306	R	97	118	107	10	13	8	9	8	-
307	R	92	100	95	9	9	10	8	8	-
308	R	113	86	100	13	11	9	14	14	6
401	O	82	96	88	6	5	6	13	8	5
402	R	103	92	98	11	-	8	-	13	-
403	R	111	104	108	13	11	7	13	15	-
404	O	82	107	93	8	6	9	4	7	9
405	O	91	114	102	9	-	7	-	10	-
406	O	91	124	107	9	9	5	12	8	9
407	O	91	80	85	5	9	13	8	5	11
408	O	92	101	96	7	8	7	11	11	9
409	R	102	124	113	11	11	6	12	12	10
501	R	98	92	95	8	11	10	10	10	-
502	R	103	120	112	11	11	7	13	11	-
503	R	105	115	110	11	10	8	12	13	-
504	R	92	95	92	9	6	10	10	9	-
505	R	97	104	100	6	12	9	11	10	-
506	R	97	102	100	10	12	6	10	10	-

Student Number	WISC Norms (Revised or Old)	Verbal IQ	Performance IQ	Full Scale IQ	Information	Comp.	Arith.	Sim.	Voc.	Digit Span
507	R	94	90	91	6	11	10	10	8	-
508	R	96	109	102	8	8	12	10	9	-
509	R	91	106	98	7	9	7	9	11	-
510	R	97	84	89	10	10	9	11	8	-
601	R	101	102	101	10	10	8	13	10	-
602	R	97	101	99	9	11	7	11	10	-
603	R	88	92	89	6	11	8	7	9	-
604	R	81	84	81	6	6	8	7	8	-
605	-	-	-	-	-	-	-	-	-	-
606	R	92	106	99	8	-	8	12	10	-
607	R	97	111	103	7	11	9	11	10	-
608	R	101	111	105	11	9	10	11	10	-
609	R	96	106	101	7	13	6	9	12	-
610	O	105	118	112	10	10	10	13	11	12
701	R	100	91	95	8	13	11	9	9	9
702	R	97	106	101	9	9	11	11	8	6
703	R	87	95	90	6	14	5	8	7	6
704	R	90	100	93	9	9	9	8	7	14

Student Number	WISC Norms (Revised or Old)	Verbal IQ	Performance IQ	Full Scale IQ	Information	Comp.	Arith.	Sim.	Voc.	Digi
507	R	94	90	91	6	11	10	10	8	-
508	R	96	109	102	8	8	12	10	9	-
509	R	91	106	98	7	9	7	9	11	-
510	R	97	84	89	10	10	9	11	8	-
601	R	101	102	101	10	10	8	13	10	-
602	R	97	101	99	9	11	7	11	10	-
603	R	88	92	89	6	11	8	7	9	-
604	R	81	84	81	6	6	8	7	8	-
605	-	-	-	-	-	-	-	-	-	-
606	R	92	106	95	8	-	8	12	10	-
607	R	97	111	103	7	11	9	11	10	-
608	R	101	111	105	11	9	10	11	10	-
609	R	96	106	101	7	13	6	9	12	-
610	O	105	118	112	10	10	10	13	11	1
701	R	100	91	95	8	13	11	9	9	
702	R	97	106	101	9	9	11	11	8	
703	R	87	95	90	6	14	5	8	7	
704	R	90	100	93	9	9	9	8	7	1

WISC

Student Number	Picta. Comp.	Pict. Arrange.	Block Design	Obj.Ass.	Coding	Maze
101	14	-	13	15	2	-
102	9	10	11	9	5	-
103	11	12	7	8	11	-
104	14	11	14	13	11	-
105	14	11	13	13	10	-
106	12	11	10	10	6	-
107	8	11	9	10	8	-
108	7	9	7	9	9	-
109	-	-	-	-	-	-
110	13	14	11	15	5 pro-rated	-
201	8	6	11	10	9	-
202	8	8	7	5	4	-
203	6	8	7	13	10	-
204	9	9	6	9	13	-
205	8	9	7	10	6	-
206	8	13	10	9	9	-
207	6	8	6	7	10	-
208	10	11	11	10	12	-
209	7	9	4	8	7	-
210	7	13	11	12	13	-
211	7	9	4	8	7	-
212	9	11	3	10	8	-
301	15	10	12	16	7	-
302	14	12	12	15	11	-
303	8	10	7	9	7	-
304	-	-	-	-	-	-
305	15	11	13	12	12	-
306	16	14	12	11	10	-
307	11	8	11	13	7	-
308	7	9	7	8	9	-
401	9	9	9	11	9	-
402	-	13	11	-	3	-
403	11	11	11	14	6	-
404	11	11	12	7	14	-
405	-	11	13	-	12	-
406	15	13	13	13	13	-
407	8	5	10	8	5	-
408	10	11	13	7	10	-
409	17	14	12	14	10	-
501	7	10	9	9	10	-
502	11	14	12	17	10	-
503	13	14	12	12	10	-
504	9	11	8	9	10	-
505	11	9	9	11	13	-
506	14	8	10	14	6	-
507	11	9	7	7	9	-
508	15	14	10	10	8	-

WISC

Student Number	Picta. Comp.	Pict. Arrange.	Block Design	Obj. Ass.	Coding	Maze
509	16	14	9	11	5	-
510	11	3	8	10	7	-
601	11	9	11	12	9	-
602	11	13	10	13	4	-
603	10	9	9	7	10	-
604	8	9	10	7	4	-
605	-	-	-	-	-	-
606	11	13	9	14	8	-
607	11	15	9	13	10	-
608	13	15	13	8	9	-
609	11	11	10	9	14	-
610	14	15	12	14	8	-
701	11	9	6	11	7	-
702	12	11	11	10	11	-
703	8	5	10	14	10	-
704	10	8	13	10	9	-

Appendix C

Expected and Actual Scores, Benton Visual Retention Test

BENTON VISUAL RETENTION TEST

Student Number	Score	
	Expected	Actual
101	7	7
102	7	6
103	7	9
104	7	8
105	7	8
106	7	9
107	7	1*
108	7	8
109	7	6
110	8	8
201	7	7
202	7	4*
203	7	2*
204	7	5*
205	7	5*
206	7	9
207	7	9
208	7	7
209	7	5*
210	7	6
211	7	9
212	7	6
301	8	8
302	8	6*
303	7	6
304	7	8
305	8	9
306	8	9
307	8	7
308	7	7
401	7	5*
402	7	5*
403	8	5*
404	7	6
405	7	9
406	8	7
407	7	5*
408	7	6
409	8	9

Benton Visual Retention Test

Student Number	Score Expected	Score Actual
501	7	6
502	8	7
503	8	9
504	7	4*
505	7	4*
506	7	7
507	6	7
508	7	7
509	7	8
510	7	7
601	7	4*
602	7	7
603	7	4*
604	7	6
605	7	3*
606	7	8
607	8	7
608	8	5*
609	7	9
610	8	7
701	8	7
702	8	7
703	7	4*
704	7	10

* "An obtained score which is two points below the expected score may be considered to raise the question of a specific disability in visual memory of visuomotor function. An obtained score which is three or more points below the expected score may be considered to suggest such a disability." (p. 44 of manual).

Appendix D

Raw Scores, Bender Gestalt

BENDER GESTALT TEST OF VISUAL MOTOR INTEGRATION

Student Number	Number of Errors
101	1
102	0
103	1
104	1
105	0
106	1
107	1
108	0
109	1
110	0
201	0
202	2
203	2
204	0
205	0
206	2
207	0
208	0
209	1
210	0
211	0
211	0
301	0
302	1
303	0
304	3
305	0
306	1
307	0
308	0
401	0
402	2
403	3
404	1
405	2
406	1
407	0
408	0
409	0
501	1
502	0
503	0
504	2
505	1
506	0
507	2
508	2
509	1
510	2

Bender Gestalt Test of Visual Motor Integration

Student Number	Number of Errors
601	1
602	2
603	1
604	0
605	1
606	0
607	0
608	1
609	0
610	3
701	0
702	1
703	0
704	0

Appendix E

Mental Age Scores, Detroit Tests of Learning Aptitudes, Selected Subtests

DETROIT TESTS OF LEARNING APTITUDE

-SUBTEST #5- MOTOR SPEED AND PRECISION

Student Number	Number Correct	Mental Age (yrs. & mo.)	Mental Age In Months
101	260	15-3	183
102	198	10-9	129
103	176	11-9	141
104	193	12-6	150
105	274	16-6	198
106	227	12-9	153
107	174	11-6	138
108	189	12-3	147
109	235	13-3	159
110	231	13-0	156
201	155	10-3	123
202	241	13-9	165
203	213	13-9	165
204	110	7-9	93
205	280	17-0	204
206	230	13-0	156
207	162	10-9	129
208	189	12-3	147
209	229	12-9	153
210	220	14-6	174
211	298	18-6	222
212	223	12-6	150
301	206	11-3	135
302	258	15-3	183
303	285	17-6	210
304	138	9-3	111
305	306	18-6	222
306	244	14-0	168
307	291	18-0	216
308	313	18-6	222
401	257	15-0	180
402	207	11-3	135
403	250	14-6	174
404	260	15-3	183
405	132	10-6	126
406	272	10-3	195
407	286	17-6	210
408	207	11-3	135
409	245	14-0	168
501	172	11-6	138
502	148	10-0	120
503	192	12-6	150
504	225	15-0	180
505	238	16-3	195

Detroit Tests of Learning Aptitude
-Subtest #5- Motor Speed and Precision

Student Number	Number Correct	Mental Age (yrs. & mo.)	Mental Age in Months
506	209	13-6	162
507	188	12-3	147
508	155	10-3	123
509	157	10-6	126
510	216	14-0	168
601	247	14-3	171
602	197	12-9	153
603	302	18-6	222
604	152	10-3	123
605	146	9-9	117
606	272	16-3	195
607	314	18-6	222
608	248	14-3	171
609	291	18-0	216
610	199	12-9	153
701	248	14-3	171
702	290	17-9	213
703	269	16-0	192
704	262	15-6	186

DETROIT TESTS OF LEARNING APTITUDE

-SUBTEST #10 - ORIENTATION

Student Number	Number Correct	Mental Age (yrs. & mo.)	Mental Age In Months
101	39	12-0	144
102	37	11-0	132
103	38	11-6	138
104	40	12-6	150
105	40	12-6	150
106	39	12-0	144
107	34	9-6	114
108	36	10-6	126
109	38	11-6	138
110	40	12-6	150
201	40	12-6	150
202	39	12-0	144
203	39	12-0	144
204	38	11-6	138
205	39	12-0	144
206	38	11-6	138
207	40	12-6	150
208	37	11-0	132
209	39	12-0	144
210	40	12-6	150
211	39	12-0	144
212	38	11-6	138
301	41	13-0	156
302	40	12-6	150
303	37	11-0	132
304	36	10-6	126
305	39	12-0	144
306	42	13-6	162
307	41	13-0	156
308	42	13-6	162
401	39	12-0	144
402	39	12-0	144
403	39	12-0	144
404	40	12-6	150
405	38	11-6	138
406	39	12-0	144
407	35	10-0	120
408	39	12-0	144
409	37	11-0	132
501	38	11-6	136
502	39	12-0	144
503	41	13-0	156
504	41	13-0	156

Detroit Tests of Learning Aptitude
-Subtest #10 - Orientation

Student Number	Number Correct	Mental Age (yrs. & mo.)	Mental Age In Months
505	36	10-6	126
506	38	11-6	138
507	40	12-6	150
508	38	11-6	138
509	34	9-6	114
510	39	12-0	144
601	40	12-6	150
602	39	12-0	144
603	38	11-6	138
604	40	12-6	150
605	37	11-0	132
606	38	11-6	138
607	37	11-0	132
608	41	13-0	156
609	40	12-6	150
610	42	13-6	162
701	39	12-0	144
702	40	12-6	150
703	38	11-6	138
704	41	13-0	156

DETROIT TESTS OF LEARNING APTITUDE

-SUBTEST #13 - AUDITORY ATTENTION SPAN FOR RELATED SYLLABLES

Student Number	# Correct	Mental Age (yrs & mo.)	Mental Age In Months
101	44	6-0	72
102	53	7-6	90
103	36	4-9	57
104	59	8-6	102
105	40	5-3	63
106	56	8-0	96
107	44	6-0	72
108	60	8-6	102
109	31	4-6	54
110	71	10-6	126
201	60	8-6	102
202	76	11-3	135
203	77	11-6	138
204	66	9-6	114
205	64	9-3	111
206	74	11-0	132
207	51	7-0	84
208	45	6-0	72
209	68	10-0	120
210	68	10-0	120
211	70	10-3	123
212	77	11-6	138
301	-	-	-
302	-	-	-
303	58	8-3	99
304	68	10-0	120
305	64	9-3	111
306	60	8-6	102
307	75	11-0	132
308	-	-	-
401	-	-	-
402	73	10-9	129
403	51	7-0	84
404	63	9-0	108
405	66	9-6	114
406	-	-	-
407	73	10-9	129
408	81	12-0	144
409	76	11-3	135
501	46	6-3	75
502	59	8-6	102
503	58	8-3	99
504	76	11-3	135
505	69	10-0	120

Detroit Tests of Learning Aptitude
-Subtest #13 - Auditory Attention
Span for Related Syllables

Student Number	# Correct	Mental Age (yrs. & mo.)	Mental Age in Months
506	41	5-6	66
507	63	9-0	108
508	68	10-0	120
509	46	6-3	75
510	-	-	-
601	75	11-0	132
602	91	13-9	165
603	-	-	-
604	59	8-6	102
605	60	8-6	102
606	82	12-3	147
607	75	11-0	132
608	75	10-0	120
609	78	11-6	138
610	65	9-6	114
701	-	-	-
702	81	12-0	144
703	78	11-6	138
704	73	10-9	129

Appendix F

Instructional Spelling Levels, Temple Informal Spelling Test

TEMPLE INFORMAL SPELLING TEST

Student Number	Instructional Spelling Level (Grade)
101	2
102	4
103	3
104	3
105	4
106	2
107	2
108	4
109	4
110	4
201	4
202	5
203	6
204	3
205	2
206	2
207	4
208	5
209	4
210	3
211	6
212	8+
301	2
302	2
303	4
304	1
305	6
306	3
307	5
308	7
401	3
402	6
403	4
404	8
405	6
406	4
407	4
408	4
409	3

Temple Informal Spelling Test

Student Number	Instructional Spelling Level (Grade)
501	4
502	2
503	3
504	2
505	7
506	3
507	5
508	4
509	1
510	3
601	4
602	1
603	2
604	2
605	3
606	2
607	4
608	3
609	2
610	2
701	5
702	- (refused further testing)
703	- (refused further testing)
704	4

Appendix G

Raw Scores and Quartile Ranking, Lincoln Intermediate Spelling Test

LINCOLN INTERMEDIATE SPELLING TEST

Student Number	# of Words Correct (100 Words)	Quartile Ranking
101	9	1
102	27	1
103	12	1
104	23	1
105	31	1
106	8	1
107	23	1
108	31	1
109	20	1
110	23	1
201	24	1
202	35	1
203	54	1
204	26	1
205	5	1
206	22	1
207	38	1
208	33	1
209	38	1
210	27	1
211	46	1
212	86	-
301	7	1
302	2	1
303	24	1
304	44	1
305	27	1
306	54	1
307	34	1
308	74	1
401	21	1
402	63	-
403	10	1
404	80	-
405	36	1
406	33	1
407	29	1
408	12	1
409	23	1
501	25	1
502	10	1
503	21	1
504	3	1

Lincoln Intermediate Spelling Test

Student Number	# of Words Correct (100 Words)	Quartile Ranking
505	69	2
506	8	1
507	31	1
508	26	1
509	9	1
601	45	1
602	1	1
603	4	1
604	9	1
605	18	1
606	17	1
607	36	1
608	15	1
609	8	1
610	18	1
701	Incomplete	
702	Refused	
703	Refused	
704	31	1

Appendix H

Raw Scores, Age Equivalents, Percentiles, Myklebust Picture Story Language Test

MYKLEBUST PICTURE STORY LANGUAGE TEST

Student Number	Total Words	Age Equiv. (months)	%	Total Sentences	Age Equiv. (months)	%
101	49	96	5	5	96	25
102	161	-	65	15	-	80
103	120	144	45	22	-	90
104	136	156	50	13	-	75
105	104	132	30	13	-	75
106	90	120	25	7	96	55
107	75	108	10	9	120	50
108	62	96	5	6	96	25
109	97	132	30	10	132	75
110	113	132	45	12	-	80
201	122	144	45	15	-	80
202	232	204	95	19	204	90
203	99	132	25	11	156	60
204	141	144	45	13	204	70
205	182	-	85	22	-	95
206	59	96	5	5	96	15
207	221	-	80	19	-	90
208	243	-	85	18	-	85
209	69	96	70	11	120	70
210	86	108	25	9	108	50
211	58	96	2	4	84	2
212	168	204	65	15	204	85
301	-	-	-	-	-	-
302	57	96	5	4	84	10
303	60	96	2	6	96	25
304	31	84	2	4	84	10
305	59	96	10	3	84	5
306	63	96	10	6	96	45
307	53	96	5	5	96	25
308	78	96	20	9	108	50
401	50	96	5	7	96	55
402	57	96	5	3	84	5
403	70	108	15	7	96	55
404	100	132	35	7	96	55
405	65	96	10	4	84	35
406	56	96	2	7	96	20
407	94	120	30	7	96	55
408	55	96	2	10	108	60
409	100	132	25	9	120	50
501	137	156	50	16	-	80
502	45	96	2	4	84	10
503	88	108	25	11	120	60
504	43	96	5	5	96	15
505	67	96	10	10	132	55
506	104	120	30	10	108	55

MYKLEBUST PICTURE STORY LANGUAGE TEST

Student Number	Total Words	Age Equiv. (months)	%	Total Sentences	Age Equiv. (months)	%
507	54	96	5	5	84	15
508	42	96	2	5	96	15
509	-	-	-	-	-	-
510	32	84	2	3	84	5
601	104	108	30	10	132	55
602	51	96	5	7	96	35
603	46	96	5	5	96	25
604	74	108	10	8	108	40
605	38	84	2	5	84	15
606	46	96	5	4	84	15
607	-	-	-	-	-	-
608	67	96	10	7	96	55
609	84	108	20	9	108	70
610	81	108	15	4	84	10
701	54	96	5	6	84	45
702	35	84	2	3	84	5
703	-	-	-	-	-	-
704	59	96	10	6	96	45

Student Number	Words Per Sentence	Age Equiv. (months)	%	Syntax Quotient	Age Equiv. (months)	%
101	9.8	108	5	90	96	10
102	10.7	120	20	92	108	5
103	5.4	84	2	94	108	15
104	10.4	120	20	97	156	40
105	8	96	5	96	132	30
106	12.8	144	25	80	-	2
107	8.3	96	5	79	84	2
108	10.3	120	15	98	204	55
109	9.7	108	5	93	108	15
110	9.4	108	5	97	168	50
201	8.1	96	45	97	156	40
202	12.2	144	20	95	108	5
203	9	108	10	93	108	10
204	10.8	120	15	94	108	15
205	8.2	96	5	86	84	2
206	11.8	132	35	100	204	98
207	11.6	132	20	92	96	5
208	13.5	156	45	98	168	45
209	6.2	84	2	91	96	5
210	9.5	108	10	91	96	5
211	14.5	168	50	92	96	5
212	11.2	132	15	98.8	168	50
301	-	-	-	-	-	-
302	14.2	156	55	97.7	193	40
303	10	108	10	95	108	5
304	7.7	96	2	100	204	98
305	19.6	-	85	91	96	10
306	10.5	120	10	968	132	30
307	10.6	120	10	94	108	20
308	8.6	96	2	100	204	98
401	7.1	84	2	98	204	55
402	19	-	90	100	204	98
403	10	120	10	94	108	20
404	14.2	156	35	90	96	10
405	16.2	204	75	98	204	55
406	8	96	2	94	108	5
407	13.4	144	30	94	108	20
408	5.5	84	2	84	84	2
409	11.1	132	25	92	108	5
501	8.5	96	5	92	108	5
502	11.2	132	10	80	84	2
503	8	96	2	94	108	15
504	8.6	96	5	81	84	2
505	6.7	84	5	85	84	2

Student Number	Words Per Sentence	Age Equiv. (months)	%	Syntax Quotient	Age Equiv. (months)	%
506	10.4	120	15	97	120	35
507	10.8	120	15	93	96	10
508	8.4	96	5	87	96	2
509	-	-	-	-	-	-
510	10.6	120	10	90	96	10
601	10.4	120	15	95	120	20
602	7.2	96	2	93	108	10
603	9.20	108	5	95	120	20
604	9.2	108	10	94	108	15
605	7.6	96	2	92	96	5
606	11.5	132	15	88	96	5
607	-	-	-	-	-	-
608	9.5	108	5	93	108	15
609	9.3	108	5	96	132	30
610	20.2	-	90	93	108	10
701	9	108	5	89	96	5
702	11.6	132	10	92	108	10
703	-	-	-	-	-	-
704	9.8	108	10	89	96	5

Appendix I

Raw Scores, Grade Level Scores, Scaled Scores, Gain Scores, Stanford Achievement Tests

STANFORD ACHIEVEMENT TEST RESULTS

Please Note: Students were pre and post-tested only in those areas in which they received instruction.
Students who were post-tested but not pre-tested entered the program after February 1, 1976.

	Reading Comprehension							Math Concepts							Math Computation						
	Pre			Post				Pre			Post				Pre			Post			
Student Number	Raw	Grade	Scale	Raw	Grade	Scale	Gain	Raw	Grade	Scale	Raw	Grade	Scale	Gain	Raw	Grade	Scale	Raw	Grade	Scale	Gain
101	40	3.3	135	48	4.0	143	.7	18	5.4	158	26	7.5	180	2.1	19	5.0	157	21	5.1	158	.1
102	22	3.5	137	34	4.6	150	1.1														
103	41	3.4	136	42	3.6	138	.2	21	5.0	153	25	5.8	163	.8	19	3.8	143	30	5.3	161	1.5
104	52	4.3	146	61	5.9	163	1.6	21	6.0	166	21	5.8	163	-.2	32	6.7	173	36	7.8	182	1.1
105	44	7.1	174	46	7.4	176	.3	27	8.4	187											
106				56	4.9	154					26	6.0	167					32	5.6	164	
107				59	5.5	159												30	5.3	161	
108	29	4.5	149	49	6.6	169	2.1	24	7.5	178	21	6.8	174	-.7	26	6.4	170	30	6.9	177	.5
109	20	3.1	133	46	6.3	166	3.2														
110	33	5.1	155	55	7.6	178	2.5														
201	48	6.7	170	47	6.4	169	-.3	23	6.5	171	26	7.5	180	1.0	13	3.9	144	24	5.5	164	1.6
202	38	6.4	167	55	9.8	191	3.4	21	6.5	171	26	7.9	184	1.4	14	4.3	148	24	6.0	169	1.7
203	49	6.8	171	56	7.7	179	.9	15	4.7	152	20	5.6	163	.9	27	6.0	167	28	6.0	169	0
204	31	4.8	151	44	5.9	166	1.1	10	3.5	138	15	4.5	152	1.0	24	5.6	164	30	6.3	170	.7
205	21	3.3	134	20	2.5	133	-.8	17	5.2	157	22	6.0	169	.8	22	5.4	162	23	5.4	163	0
206	39	6.5	168	51	8.6	184	2.1	24	7.5	178	26	7.9	184	.4	33	7.8	182	37	8.8	189	1.0
207	28	4.4	148	35	4.8	157	.4	24	7.1	174	21	5.8	166	-1.3	29	6.2	170	37	8.3	185	2.1
208	42	6.0	164	52	7.0	174	1.0	15	4.7	152	18	5.2	158	.5	30	6.4	170	36	7.8	182	1.4
209	45	6.4	167	47	6.4	169	0	17	5.2	157	16	4.7	154	-.5	32	6.7	173	31	6.5	172	-.2
210	28	4.4	148	33	4.5	155	.1	20	5.8	163	28	8.4	187	2.6	36	7.8	182	39	9.5^{+}	198	1.7
211	pretest not given			39	5.3	161					21	5.8	166					16	4.3	151	
212	56	9.8	191	57	10.5^{+}	195	.7	22	6.8	174	29	9.1	194	2.3	29	6.7	175	35	8.3	135	1.6
301								22	6.2	169	30	9.5^{+}	199	3.3	16	4.5	151	31	6.5	172	2.0
302	42	6.0	164	67	9.5^{+}	202	3.5	24	7.5	178	30	9.6	197	2.1	24	6.0	169	37	8.8	189	2.8
303	45	6.4	167	54	7.4	176	1.0	22	6.8	174	24	7.6	179	.8	21	5.6	164	37	8.3	189	3.2
304				73	3.0	132					30	4.5	149					36	5.1	159	
305								18	5.8	163	25	7.7	181	1.9	23	5.9	166	27	6.5	172	.6
306	34	5.2	156	45	6.0	164	.8	27	8.4	187	29	9.1	194	.7	40	10.5^{+}	201	40	10.5^{+}	201	0
307	49	6.8	171	52	9.5^{+}	173	2.7	28	8.7	190	29	9.1	194	.4	32	7.5	179	40	10.5^{+}	201	3.0
308								27	8.4	187	30	9.6	197	1.2	36	8.5	187	39	9.9	202	1.4

STANFORD ACHIEVEMENT TEST RESULTS

Student Number	Reading Comprehension							Math Concepts							Math Computation						
	Pre			Post				Pre			Post				Pre			Post			
	Raw	Grade	Scale	Raw	Grade	Scale	Gain	Raw	Grade	Scale	Raw	Grade	Scale	Gain	Raw	Grade	Scale	Raw	Grade	Scale	Gain
401	53	4.4	148	68	8.0+	182+	3.6	28	8.7	190	25	7.7	181	-1.0	20	5.5	163	26	6.4	171	.9
402	27	5.8	162	39	8.1	182	2.3	27	8.4	187	22	7.1	177	-1.3	27	6.5	172	32	7.5	179	1.0
403	41	6.7	171	50	8.1	182	1.4	17	5.6	161	22	7.1	177	1.5	17	5.0	157	23	5.9	166	.9
404	36	6.2	165	44	6.9	173	.7	21	6.5	171	25	7.7	181	1.2	39	9.9	198	42	10.5+	207	.6
405	50	8.1	182	55	9.8	191	1.7	23	7.1	177	26	7.9	184	.8	15	4.5	151	34	8.0	183	3.5
406	41	6.7	171	57	10.5+	195	3.8	25	7.7	181	16	5.6	161	-2.1	23	5.9	166	23	5.9	166	0
407	31	5.4	158	37	6.0	163	.6	16	5.4	157	18	5.9	167	.5	30	6.9	177	33	7.8	182	.9
408	34	5.8	162	46	7.4	176	1.6	27	8.4	187	25	7.7	181	-.7	40	10.5+	201	23	5.9	166	-4.6
409	23	3.6	138	41	5.5	159	1.9	14	4.5	150	24	6.5	171	2.0	21	5.2	160	12	3.7	142	-1.5
501	23	4.2	145	35	5.7	161	1.5	17	3.7	161	29	9.1	194	5.4	12	5.0	143	30	6.9	179	1.9
502	27	4.2	154	43	7.9	162	3.7	11	3.7	143	23	6.2	169	2.5	13	3.9	146	26	7.5	165	3.6
503	27	4.9	146	48	7.7	179	2.8	20	4.2	163	28	8.7	190	4.5	22	5.5	162	32	7.5	179	2.0
504	16	2.3	123	49	6.6	169	4.3	9	3.2	136	25	6.8	174	3.6	14	4.1	147	38	8.9	189	4.7
505	22	4.8	154	53	11.3	203	6.5	14	4.5	150	24	6.5	171	2.0	15	4.3	149	35	7.5	179	3.2
506	23	3.6	138	56	7.7	179	4.1	10	3.5	138	21	5.8	163	2.3	16	4.5	151	32	6.7	173	2.2
507	36	5.4	158	40	6.5	168	1.1	11	4.0	140	14	5.2	157	1.2	11	3.6	140	23	5.9	166	2.3
508	28	5.0	155	47	4.6	178	-.4	20	6.2	170	24	7.6	179	1.4	12	3.9	143	37	8.8	189	4.9
509	28	2.4	103	refused testing				18	2.4	123					18	2.3	128				
510	28	4.4	187	43	5.8	162	1.4	11	3.7	140	20	5.6	161	1.9	9	3.0	135	21	5.1	158	2.1
601	60	5.3	157	66	6.9	172	1.6	24	5.6	160	24	5.6	160	0	26	4.7	154	35	6.5	172	1.8
602	pretest not given			46	3.8	141					29	7.5	178								
603	47	3.8	141	59	5.5	159	1.7	20	4.7	151	27	6.2	170	1.5	32	5.6	164	33	5.9	166	.3
604	45	3.7	140	64	6.7	170	3.0														
605	43	3.6	138	57	5.1	155	1.5	17	3.9	143	20	4.7	151	.8	21	4.1	146	27	4.8	155	.7
606	64	6.2	165	63	6.4	167	.2	27	6.2	170	29	7.5	178	1.3	36	7.5	179	37	7.5+	179+	0
607	46	6.5	168	61	8.9	187	2.4	24	6.8	174	24	6.5	171	-.3	26	5.9	166	28	6.0	167	.1
608	62	9.3	189	65	9.5+	195	.2														
609	59	5.1	155	63	6.4	167	1.3	26	6.0	167	32	8.0+	182+	2.0	29	5.1	159	15	3.3	139	-1.8
610	46	3.8	141	50	4.2	145	.4														

STANFORD ACHIEVEMENT TEST RESULTS

Please Note: Students were pre and post-tested only in those areas in which they received instruction.
Students who were post-tested but not pre-tested entered the program after February 1, 1976.

	Reading Comprehension							Math Concepts							Math Computation						
	Pre			Post				Pre			Post				Pre			Post			
Student Number	Raw	Grade	Scale	Raw	Grade	Scale	Gain	Raw	Grade	Scale	Raw	Grade	Scale	Gain	Raw	Grade	Scale	Raw	Grade	Scale	Gain
101	40	3.3	135	48	4.0	143	.7	18	5.4	158	26	7.5	180	2.1	19	5.0	157	21	5.1	158	.1
102	22	3.5	137	34	4.6	150	1.1														
103	41	3.4	136	42	3.6	138	.2	21	5.0	153	25	5.8	163	.8	19	3.8	143	30	5.3	161	1.5
104	52	4.3	146	61	5.9	163	1.6	21	6.0	166	21	5.8	163	-.2	32	6.7	173	36	7.8	182	1.1
105	44	7.1	174	46	7.4	176	.3	27	8.4	187											
106				56	4.9	154					26	6.0	167					32	5.6	164	
107				59	5.5	159												30	5.3	161	
108	29	4.5	149	49	6.6	169	2.1	24	7.5	178	21	6.8	174	-.7	26	6.4	170	30	6.9	177	.5
109	20	3.1	133	46	6.3	166	3.2														
110	33	5.1	155	55	7.6	178	2.5														
201	48	6.7	170	47	6.4	169	-.3	23	6.5	171	26	7.5	180	1.0	13	3.9	144	24	5.5	164	1.6
202	38	6.4	167	55	9.8	191	3.4	21	6.5	171	26	7.9	184	1.4	14	4.3	148	24	6.0	169	1.7
203	49	6.8	171	56	7.7	179	.9	15	4.7	152	20	5.6	163	.9	27	6.0	167	28	6.0	169	0
204	31	4.8	151	44	5.9	166	1.1	10	3.5	138	15	4.5	152	1.0	24	5.6	164	30	6.3	170	.7
205	21	3.3	134	20	2.5	133	-.8	17	5.2	157	22	6.0	169	.8	22	5.4	162	23	5.4	163	0
206	39	6.5	168	51	8.6	184	2.1	24	7.5	178	26	7.9	184	.4	33	7.8	182	37	8.8	189	1.0
207	28	4.4	148	35	4.8	157	.4	24	7.1	174	21	5.8	166	-1.3	29	6.2	170	37	8.3	185	2.1
208	42	6.0	164	52	7.0	174	1.0	15	4.7	152	18	5.2	158	.5	30	6.4	170	36	7.8	182	1.4
209	45	6.4	167	47	6.4	169	0	17	5.2	157	16	4.7	154	-.5	32	6.7	173	31	6.5	172	-.2
210	28	4.4	148	33	4.5	155	.1	20	5.8	163	28	8.4	187	2.6	36	7.8	182	39	9.5$^+$	198	1.7
211	pretest not given			39	5.3	161					21	5.8	166					16	4.3	151	
212	56	9.8	191	57	10.5$^+$	195	.7	22	6.8	174	29	9.1	194	2.3	29	6.7	175	35	8.3	185	1.6
301								22	6.2	169	30	9.5$^+$	199	3.3	16	4.5	151	31	6.5	172	2.0
302	42	6.0	164	67	9.5$^+$	202	3.5	24	7.5	178	30	9.6	197	2.1	24	6.0	169	37	8.8	189	2.8
303	45	6.4	167	54	7.4	176	1.0	22	6.8	174	24	7.6	179	.8	21	5.6	164	37	8.8	189	3.2
304				73	3.0	132					30	4.5	149					36	5.1	159	
305								18	5.8	163	25	7.7	181	1.9	23	5.9	166	27	6.5	172	.6
306	34	5.2	156	45	6.0	164	.8	27	8.4	187	29	9.1	194	.7	40	10.5$^+$	201	40	10.5$^+$	201	0
307	49	6.8	171	52	9.5$^+$	173	2.7	28	8.7	190	29	9.1	194	.4	32	7.5	179	40	10.5$^+$	201	3.0
308								27	8.4	187	30	9.6	197	1.2	36	8.5	187	39	9.9	202	1.4

STANFORD ACHIEVEMENT TEST RESULTS

	Reading Comprehension							Math Concepts							Math Computation						
	Pre			Post				Pre			Post				Pre			Post			
Student Number	Raw	Grade	Scale	Raw	Grade	Scale	Gain	Raw	Grade	Scale	Raw	Grade	Scale	Gain	Raw	Grade	Scale	Raw	Grade	Scale	Gain
401	53	4.4	148	68	8.0^{+}	182^{+}	3.6	28	8.7	190	25	7.7	181	-1.0	20	5.5	163	26	6.4	171	.9
402	27	5.8	162	39	8.1	182	2.3	27	8.4	187	22	7.1	177	-1.3	27	6.5	172	32	7.5	179	1.0
403	41	6.7	171	50	8.1	182	1.4	17	5.6	161	22	7.1	177	1.5	17	5.0	157	23	5.9	166	.9
404	36	6.2	165	44	6.9	173	.7	21	6.5	171	25	7.7	181	1.2	39	9.9	198	42	10.5^{+}	207	.6
405	50	8.1	182	55	9.8	191	1.7	23	7.1	177	26	7.9	184	.8	15	4.5	151	34	8.0	183	3.5
406	41	6.7	171	57	10.5^{+}	195	3.8	25	7.7	181	16	5.6	161	-2.1	23	5.9	166	23	5.9	166	0
407	31	5.4	158	37	6.0	163	.6	16	5.4	157	18	5.9	167	.5	30	6.9	177	33	7.8	182	.9
408	34	5.8	162	46	7.4	176	1.6	27	8.4	187	25	7.7	181	-.7	40	10.5^{+}	201	23	5.9	166	-4.6
409	23	3.6	138	41	5.5	159	1.9	14	4.5	150	24	6.5	171	2.0	21	5.2	160	12	3.7	142	-1.5
501	23	4.2	145	35	5.7	161	1.5	17	3.7	161	29	9.1	194	5.4	12	5.0	143	30	6.9	179	1.9
502	27	4.2	154	43	7.9	162	3.7	11	3.7	143	23	6.2	169	2.5	13	3.9	146	26	7.5	165	3.6
503	27	4.9	146	48	7.7	179	2.8	20	4.2	163	28	8.7	190	4.5	22	5.5	162	32	7.5	179	2.0
504	16	2.3	123	49	6.6	169	4.3	9	3.2	136	25	6.8	174	3.6	14	4.1	147	38	8.8	189	4.7
505	22	4.8	154	53	11.3	203	6.5	14	4.5	150	24	6.5	171	2.0	15	4.3	149	35	7.5	179	3.2
506	23	3.6	138	56	7.7	179	4.1	10	3.5	138	21	5.8	163	2.3	16	4.5	151	32	6.7	173	2.2
507	36	5.4	158	40	6.5	168	1.1	11	4.0	140	14	5.2	157	1.2	11	3.6	140	23	5.9	166	2.3
508	28	5.0	155	47	4.6	178	-.4	20	6.2	170	24	7.6	179	1.4	12	3.9	143	37	8.8	189	4.9
509	28	2.4	103	refused testing				18	2.4	123					18	2.3	128				
510	28	4.4	187	43	5.8	162	1.4	11	3.7	140	20	5.6	161	1.9	9	3.0	135	21	5.1	158	2.1
601	60	5.3	157	66	6.9	172	1.6	24	5.6	160	24	5.6	160	0	26	4.7	154	35	6.5	172	1.8
602	pretest not given			46	3.8	141					29	7.5	178								
603	47	3.8	141	59	5.5	159	1.7	20	4.7	151	27	6.2	170	1.5	32	5.6	164	33	5.9	166	.3
604	45	3.7	140	64	6.7	170	3.0														
605	43	3.6	138	57	5.1	155	1.5	17	3.9	143	20	4.7	151	.8	21	4.1	146	27	4.8	155	.7
606	64	6.2	165	63	6.4	167	.2	27	6.2	170	29	7.5	178	1.3	36	7.5	179	37	7.5^{+}	179^{+}	0
607	46	6.5	168	61	8.9	187	2.4	24	6.8	174	24	6.5	171	-.3	26	5.9	166	28	6.0	167	.1
608	62	9.3	189	65	9.5^{+}	195	.2														
609	59	5.1	155	63	6.4	167	1.3	26	6.0	167	32	8.0^{+}	182^{+}	2.0	29	5.1	159	15	3.3	139	-1.8
610	46	3.8	141	50	4.2	145	.4														

Appendix J

Raw Scores, Percentiles, AAHPER Youth Fitness Test

AAHPER YOUTH FITNESS TEST

SIT-UPS
*female

Student Number	Age	Sit-Ups	%	Shuttle Run (seconds)	%
101	14	90	100	21.6	0
102	13	100	100	22.7	0
103	12	95	100	21.1	0
104	13	95	100	21.4	0
105	13	25	15	25.9	0
106	14	20	5	22.9	0
107	12	54	95	20.0	0
108	12	45	85	23.0	0
109	14	100	100	19.9	0
110	14	100	100	21.9	0
201	13	40	55	11.8	10
202*	14	50	95	10,4	75
203	13	0	0	12.7	5
204*	13	40	85	10.5	75
205	15	50	85	11.2	10
206	13	35	40	11.0	25
207*	13	25	30	10.5	75
208*	13	42	90	11.4	45
209*	15	20	10	11.8	25
210*	13	23	25	11.9	30
211*	15	-	-	-	-
212*	15	29	40	12.2	15
301	14	100	100	-	-
302	13	100	100	10.1	65
303*	15	30	45	11.4	35
304	13	-	-	-	-
305	14	100	100	9.8	70
306	16	-	-	-	-
307	14	-	-	-	-
308*	13	53	100	13.5	5
401	15	49	80	10.0	45
402	13	38	50	11.5	15
403	14	45	70	11.0	15
404	14	36	35	11.2	10
405	13	38	50	11.0	30
406*	14	20	15	11.9	25
407	15	23	0	12.4	5
408*	14	20	15	12.4	15
409	13	38	50	11.8	10
501	12	30	30	10.2	75
502	13	38	50	9.8	80
503*	12	20	15	12.0	25
504	12	38	60	9.9	90

AAHPER Youth Fitness Test

Sit-Ups

Student Number	Age	Sit-Ups	%	Shuttle Run (seconds)	%
505*	12	20	15	10.8	75
506	12	30	30	11.0	40
507*	12	20	15	12.0	25
508	13	38	50	11.9	10
509		—	—	—	—
510	13	45	75	10.2	60
601	13	50	90	11.2	20
602	13	33	35	9.0	95
603	14	59	95	9.8	70
604	13	46	80	11.3	20
605*	14	43	60	10.0	90
606	14	57	95	10.2	40
607	15	59	95	9.5	70
608	14	53	90	10.2	40
609	14	—	—	10.0	55
610	13	51	90	10.4	50
701	14	55	95	11.0	15
702	16	33	20	10.0	45
703	17	60	100	9.0	85
704	14	150	100.	8.0	95

AAHPER YOUTH FITNESS TEST

Pull-ups (boys)
Flexed Arm Hang (girls)

*-female

Student Number	Age	No. of Pull Ups	%	Flexed Arm Hang (seconds)	%
101	14	3	35	-	-
102	13	7	85	-	-
103	12	0	30	-	-
104	13	2	35	-	-
105	13	2	35	-	-
106	14	6	65	-	-
107	12	7	90	-	-
108	12	5	80	-	-
109	14	12	95	-	-
110	14	1	20	-	-
201	13	1	30	-	-
202*	14	-	-	8	45
203	13	-	-	-	-
204*	13	-	-	15	75
205	15	4	35	-	-
206	13	6	80	-	-
207*	13	-	-	16	75
208*	13	-	-	9	55
209*	15	-	-	3	20
210*	13	-	-	15	75
211*	15	-	-	-	-
212*	15	-	-	6	40
301	14	15	95	-	-
302	13	1	30	-	-
303*	15	-	-	-	-
304	13	-	-	-	-
305	14	14	95	-	-
306	16	-	-	-	-
307	14	-	-	-	-
308*	13	-	-	-	-
401	15	1	15	-	-
402	13	0	20	-	-
403	14	3	40	-	-
404	14	2	30	-	-
405	13	2	45	-	-
406*	14	-	-	0	5
407	15	0	5	-	-
408*	14	-	-	26	85
409	13	2	45	-	-
501	12	3	65	-	-
502	13	7	85	-	-
503*	12	-	-	5.3 sec.	35
504	12	2	55	-	-

AAHPER Youth Fitness Test

Student Number	Age	No. of Pull Ups	%	Flexed Arm Hang (seconds)	%
505*	12	-	-	7.7 sec.	45
506	12	3	65	-	-
507*	12	-	-	5.2 sec.	35
508	13	0	20	-	-
509					
510	13	6	80	-	-
601	13	0	20	-	-
602	13	3	50	-	-
603	14	10	90	-	-
604	13	2	45	-	-
605*	14				
606	14	11	95	-	-
607	15	10	80	-	-
608	14	8	80	-	-
609	14	3	40	-	-
610	13	4	65	-	-
701	14	0	10	-	-
702	16	2	10	-	-
703	17	13	90	-	-
704	14	3	40	-	-

*Female

Student Number	Age	Standing Long Jump	%	50 Yard Dash (seconds)	%
101	14	76	60	7.9	20
102	13	62	25	-	
103	12	80	95	8.0	40
104	13	66	40	7.8	30
105	13	60	20	7.9	30
106	14	71	40	6.8	75
107	14	84	95	6.3	100
108	12	58	20	8.0	40
109	14	85	90	6.5	85
110	14	70	35	8.2	10
201	13	69	50	7.6	40
202*	14	66	55	8.0	40
203	13	46	5	10.5	5
204*	13	69	75	7.6	65
205	15	62	5	7.5	15
206	13	67	45	7.4	60
207*	13	70	75	7.5	70
208*	13	69	75	7.3	80
209*	15	48	5	8.8	10
210*	13	61	40	7.0	90
211*	15	-	-	7.7	55
212*	15	41	5	8.9	10
301	14	85	90	6.7	80
302	13	67	45	7.3	60
303	15	46	5	8.7	15
304	13				
305	14	82	80	6.9	70
306	16				
307	14				
308*	13	62	45		
401	15	73	25	absent	
402	13	57	15	8.6	10
403	14	74	50	8.2	10
404	14	80	75	8.0	15
405	13	77	80	8.8	10
406*	14	59	30	8.3	25
407	15	69	15	8.4	5
408*	14	73	80	9.8	5
409	13	68	50	10.0	5
501	12	71	75	8.5	20
502	13	85	95	8.0	25
503*	12	60	50	10.2	5
504	12	66	55	8.0	40

*Female

Student Number	Age	Standing Long Jump	%	50 Yard Dash (seconds)	%
505*	12	77	95	8.0	60
506	12	60	25	9.0	10
507*	12	56	30	10.2	5
508	13	65	35	10.0	5
509	-	-	-	-	-
510	13	75	75	7.5	50
601	13	64	35	7.6	40
602	13	62	25	7.5	50
603	14	72	45	6.9	70
604	13	65	35	8.7	10
605*	14	74	85	7.3	75
606	14	84	90	7.0	65
607	15	76	35	6.8	60
608	14	80	75	7.3	45
609	14	72	45	7.4	40
610	13	77	80	7.5	50
701	14	82	80	7.0	65
702	16	77	25	7.8	5
703	17	99	95	9.3	0
704	14	72	45	8.5	10

*Female

Student Number	Age	600 Yard Run-Walk (seconds)	%
101	14	132	30
102	13	-	-
103	12	166	15
104	13	131	50
105	13	135	40
106	14	-	-
107	12	151	30
108	12	600	0
109	14	116	70
110	14	120	55
201	13	143	30
202*	14	127	90
203	13	189	5
204*	13	162	50
205	15	126	30
206	13	171	10
207*	13	126	95
208*	13	147	70
209*	15	183	20
210*	13	138	85
211*	15	129	90
212*	15	194	15
301	14	-	-
302	13	135	40
303*	15	220	5
304	13	-	-
305	14	107	85
306	16	-	-
307	14	-	-
308*	13	179	5
401	15	-	-
402	13	155	15
403	14	226	5
404	14	157	10
405	13	154	20
406*	14	184	15
407	15	163	5
408*	14	159	30
409	13	175	10
501	12	201	5
502	13	243	0
503*	12	315	0
504	12	243	5
505*	12	251	0
506	12	183	10
507*	12	315	0

*Female

Student Number	Age	600 Yard Run-Walk (seconds)	%
508	13	187	5
509	-	-	-
510	13	170	10
601	13	140	35
602	13	97	95
603	14	94	95
604	13	140	35
605*	14	123	95
606	14	107	85
607	15	109	70
608	14	112	75
609	14	128	55
610	13	147	25
701	14	125	55
702	16	115	45
703	17	118	35
704	14	113	75

APPENDIX B

Recipients of Project Materials
(Partial listing)

Harry N. Chandler
Special Education
High School
McMinnville, Ore. 97128

Irene H. Green
Director of Special Education Services
Moorestown Township Public Schools
Administration Building
North Stanwick Road
Moorestown, New Jersey 08057

Shirley Schillhammer
Phillips Road
Montpelier, Vt. 05602

John Perry
Box 15, R.F.D. 2
Orleans, Vermont 05860

Robert J. Midi
Hazen Union School
Hardwick, Vt. 05843

Lisa Ettori
73 Plain Street
Tutland, Vermont, 05701

Margaret Howard
P.O. Box 31
Craftsbury Common, Vt. 05827

Mrs. Lucille M. Byrne
Mathematics Dept. Head
St. Johnsbury Academy
St. Johnsburg, Vermont 15819

Jane O'Brien
R.F.D. 2
Maplehill
Plainfield, Vt. 05667

Sandy Radke
Sky Ranch for Boys
Sky Ranch, S. D. 57724

Marilyn Brunewald
R.F.D. 2
Stowe, Vermont 15672

Sandy Fitterer
Orleans Central Supervisory
School District, Box 57
Orleans, Vermont 05830

Robert William Cote
Olney Resource Center
Olney High School
Front Street and Duncannon Avenue
Philadelphia, PA 19120

The Groves Learning Center
2000 Hopkins Crossroad
Minnetonka, Mn. 55343

Eunice Shonk
Director IRC
Lincoln Way Special Ed. Regional
Resource Center
1400 West Main Street
Louisville, Ohio 44641

Deborah Fravel
2410 B. Berkshire Road
Number 51
Charlottesville, VA 22901

Karen Boone
P.O. Box 61
Townsend, Montana 59644

Ms. Connie Dembrosky
Department of Special Education
University of Houston
Houston, Texas 77004

Christine Dickey
Learning Disorders Consultant
Union County IED
1100 K Avenue
La Grande, Oregon 97850

Jerry L. Killingsworth
Assistant Superintendent
475 South Alameda
Lkamath Falls, OR 97601

Susan Pysher
I. U. #5
252 Waterford
Edinboro, PA 16412

Dianna Meeth
LD Project Coordinator
Miami Valley Regional Center
for Handicapped Children
1150 Beatrice Drive
Dayton, Ohio 45404

Paul G. Lambertsen
Counselor Consultant
Clackamas County Intermediate
Educational District
Marylhurst Campus
Marylhurst, Oregon 97036

Nancy Lukebill
Resource Consultant
Office of the State Superintendent
Regional Services
700 11th Avenue
Helena, Montana 59601

Dave Woodford
Special Education Specialist
Hillsboro Union High School District 3JT
1595 S.E. Tualatin Valley Highway
Hillsboro, Oregon 97123

Manheim Township School District
Manheim Township Freshman Campus
School Road, P.O. Box 5134
Lancaster, PA 17601

Mrs. Lois M. Sowers
Special Education Coordinator
Lexington City School System
Lexington, NC 27292

Mrs. Harriet Nelson
c/o Moorestown Public Schools
North Stanwick Road
Moorestown, NJ 08057

Elizabeth Wagner
Waluga Junior High School
4700 S.W. Jean Road
Lake Oswego, Oregon 97034

Darlene Westendorf
Child Service Demonstration Center
Oregon College of Education
Monmouth, Oregon 97361

Mrs. Marion Cambel
Acquisitions Coordinator
CEC Information Center on Exceptional
Children
The Council for Exceptional Children
1920 Association Drive
Reston, VA 22091

Bobbie Nickles Byrne
Director - Educational Services
Alabama Youth Services
Diagnostic & Evaluation Center
Mt. Meigs Campus, Route 5 Box 542
Montgomery, Alabama 36117

Mr. Eric Collins
Geneva Academy
Box 665
Levitown, PA 19057

Susan B. Hodinko, Director
Learning Diagnostics, Inc.
11235 Oak Leaf Drive, #102
Silver Spring, MD 20901

Judy Neuger
Chagrin Falls High School
400 East Washington Street
Chagrin Falls, Ohio 44022

Mildred H. Wood, Ed.D.
Educational Consultant
1825 Iowa Street
Cedar Falls, Iowa 50613

Edward E. Byham, Psychologist
Central Intermediate Unit
R.D. 1 Box 19 Radio Park
Philipsburg, PA 16866

Carol Lewis
Learning Development Program
Westbury Senior High School
Westbury, NY 11590

Donna L. Boies, Administrative Assistant
The Kingsbury Center
2138 Bancroft Place, NW
Washington, D.C. 20008

Polly Feis
Director of Special Services
Educational Service Unit No. 9
P.O. Box 2047
Hastings, Nebraska 68901

Edward Pieper
3735 Booth Street, Apt. 4
Kansas City, Kansas

Emily Spillman
310 N. Murray
Oklahoma State University
Stillwater, Oklahoma 74074

Amelia Sherrets, Coordinator
Office of Special Services
291 Windermere Blvd.
Amherst, New York 14226

Patricia L. Sitlington, Ph.D.
Coordinator, Secondary Area
University of N. Iowa
Cedar Falls, Iowa 50613

Delphine Schneyer
Buffalo Coordinator
ACLD of W. New York
724 Delaware Avenue
Buffalo, N.Y. 14209

Dr. Lloyd R. Kinnison
Special Education
Dept. of Applied Behavioral Studies
Oklahome State University
Stillwater, Oklahoma 74074

Barbara C. Ring, Ph.D.
Lewis and Clark College
Learning Disabilities Center
Portland, Oregon 97219

Daniel L. Frisa
School Psychologist
Buffalo Public Schools
Buffalo Alternative H.S.
280 Oak Street
Buffalo, N.Y. 14203

Lee Sherry
School Board of Alachua County
1817 E. University Avenue
Gainesville, Florida 32601

Lynda Dean
School Psychologist
Killingly Central School
Box 365
Dayville, Ct.

Kesti Campbell
Special Education
Mesa Public Schools
39 South Hibbert Street
Mesa, Arizona 85203

Gaye McNutt
University of Texas at Austin
College of Education
Austin, Texas 78712

Judy Secrist
Learning Resource Center
Boise State University
1910 University Drive
Boise, Idaho 83725

Kathleen McCunn, Counselor
Benjamin Franklin Junior High School
540 Parkhurst Boulevard
Kenmore, NY 14223

O. Sherman Welch
Educational Specialist
Office for Exceptional Children
State of Alaska
Department of Education (Ed. Prog. Sup.)
Pouch F - State Office Building
Juneau, Alaska 99811

Mr. Dan Duffy
NLRCP
1 Progress Plaza
Harrisburg, PA 17109

Donald Sierakowski
Counselor
Tolland High School
Guidance Department
Old Cathole Road
Tolland, Connecticut 06084

Betty Sue Hill
Owensboro Public School
Box 746
Owensboro, Kentucky 42301

Mrs. C. A. Oehrig
Director, IMC
The Devereau Foundation
Devon, Pennsylvania

Dr. Jesse C. Bailey, Director
Project MELD
Tuscaloosa County Board of Education
2314 9th Street
Tuscaloosa, Alabama 35401

Dr. Donna Griggs
CSDC Project Director
Department of Special Education
Alabama A & M University
Normal, Alabama 45762

Mrs. Irene Nassor
Project Director
Springfield Estates El. Sch.
6421 Meriwether Lane
Springfield, VA 22150

Dr. Robert J. Mosby
Project Director
Franklin County Special Ed. Ctr.
Armour Educational Center
Box 440
Union, Missouri 63084

Dr. Thomas D. Rowland
Project Director
Oregon College of Education
Monmouth, Oregon 97361

Mr. Storm L. Carroll
Project Director
Arrowhead Community Corrections Ctr.
504 Providence Building
Duluth, Minnesota 55802

Dr. Will Antell
Project Director
550 Cedar Street
St. Paul, Minnesota 55101

Mrs. Paula T. Downs
Project Director
East Junior High School
464 Centre Street
Brockton, Mass. 02402

Mr. Fred West
Project Director
Bureau of Exceptional Children
Capital Plaza Tower
Frankfort, Kentucky 40601

Nan Milford
Hill Top Preparatory School
South Ithan & Clyde Road
Rosemont, PA 19010

Mrs. B. R. McCandless
2469 Greenglade Rd., N.E.
Atlanta, Ga. 30345

Mrs. Betty Kendall
Secretary to the Coordinator of English
Newton Public Schools
88 Chestnut Street
West Newton, Mass. 02165

Rosemary Aman
Project KARE Director
Klein Independent School District
7200 Spring-Cypress Road
Spring, Texas 77373

Mr. James Lindsey
H204, Area 2
University Village
Athens, Georgia 30601

Dana Follis
R.R. 1, Box 58
Trafalgar, Indiana 46181

B. R. Gearheart, Ed.D.
Professor of Special Education
University of Northern Colorado
College of Education
Greenly, Colorado 80639

Ms. Janet Hoffman
Reynolds School District
531 Reynolds Road
Greenville, PA 16125

John J. Kutsop
32 Small Avenue
Caldwell, New Jersey 07006

Dan G. Lunsford
Orange County Schools
200 East King Street
Hillsborough, North Carolina 27278

Dr. Ermaleen Etter
Associate Professor
Department of Special Education
Millersville State College
Millersville, PA

Mrs. George R. McNeish
1619 East Eleventh Street
Winfield, Kansas

Beverly A. School, Ph.D.
Supervisor of Learning Disabilities
Allegheny Intermediate Unit
Suite 1300 - Two Allegheny Center
Pittsburgh, PA

Ms. Harriet Grass
Corman Diagnostic Center
12th and Melon Streets
Philadelphia, PA

Carol Bradley, Consultant
Department of Public Instruction
Division of Special Education
Grimes State Office Building
Des Moines, Iowa

Virginia Hatch
Resource Room
Hopedale Junior-Senior High School
Hopedale, Massachusetts

Mr. Jeffrey Grotsky, Regional Advisor
Penna. Dept. of Education
Division of Special Education
Box 911
Harrisburg, PA

Mr. Jeffrey Grundy
Senior Lecturer in Education
Bishop Grosseteste College, Newport
Lincoln, LN13DY
England

Dr. John C. Vactor
Coordinator of Research and Special Projects
University of Nevada
4505 Maryland Parkway
Las Vegas, Nevada

Richard Cansdale, Coordinator
Consultant Services for Elementary
Special Education
Paradise Elementary School
851 E. Tropicana
Las Vegas, Nevada

Ms. Carol McIntosh
Associate Director for Library Services
The University of Texas at Austin
College of Education
Education Building, Rm. 348
1912 Speedway
Austin, Texas

Barbara B. Averette
Staff Development Consultant
Region III Staff Development Center
P.O. Box 776
Clayton, North Carolina

Cecil D. Mercer, Ed.D.
Assistant Professor
Department of Special Education
University of Florida
Gainesville, Florida

R. W. Harward, Coordinator
Intermediate/Secondary Special
Student Services
Clark County School District
2832 East Flamingo Road
Las Vegas, Nevada

Mrs. Merideth Wilkins, Diagnostician
Diagnostic and Treatment Center
Mayfair School
420 South 16th Street
Las Vegas, Nevada

Allyson Handley
John Hopkins University
Baltimore, Maryland

Library
Department of Public Instruction
State Capitol
Bismarck, North Dakota

Dr. Ermaleen Etter
Associate Professor
Department of Special Education
Millersville State College
Millersville, PA

Mrs. George R. McNeish
1619 East Eleventh Street
Winfield, Kansas

Beverly A. School, Ph.D.
Supervisor of Learning Disabilities
Allegheny Intermediate Unit
Suite 1300 - Two Allegheny Center
Pittsburgh, PA

Ms. Harriet Grass
Corman Diagnostic Center
12th and Melon Streets
Philadelphia, PA

Carol Bradley, Consultant
Department of Public Instruction
Division of Special Education
Grimes State Office Building
Des Moines, Iowa

Virginia Hatch
Resource Room
Hopedale Junior-Senior High School
Hopedale, Massachusetts

Mr. Jeffrey Grotsky, Regional Advisor
Penna. Dept. of Education
Division of Special Education
Box 911
Harrisburg, PA

Mr. Jeffrey Grundy
Senior Lecturer in Education
Bishop Grosseteste College, Newport
Lincoln, LN13DY
England

Dr. John C. Vactor
Coordinator of Research and Special Projects
University of Nevada
4505 Maryland Parkway
Las Vegas, Nevada

Richard Cansdale, Coordinator
Consultant Services for Elementary
  Special Education
Paradise Elementary School
851 E. Tropicana
Las Vegas, Nevada

Ms. Carol McIntosh
Associate Director for Library Services
The University of Texas at Austin
College of Education
Education Building, Rm. 348
1912 Speedway
Austin, Texas

Barbara B. Averette
Staff Development Consultant
Region III Staff Development Center
P.O. Box 776
Clayton, North Carolina

Cecil D. Mercer, Ed.D.
Assistant Professor
Department of Special Education
University of Florida
Gainesville, Florida

R. W. Harward, Coordinator
Intermediate/Secondary Special
  Student Services
Clark County School District
2832 East Flamingo Road
Las Vegas, Nevada

Mrs. Merideth Wilkins, Diagnostician
Diagnostic and Treatment Center
Mayfair School
420 South 16th Street
Las Vegas, Nevada

Allyson Handley
John Hopkins University
Baltimore, Maryland

Library
Department of Public Instruction
State Capitol
Bismarck, North Dakota

Dr. Axelrod
Penn State University
Special Education
649 South Henderson Road
King of Prussia, Penna.

Dr. Betty Hare, Chairman
Department of Special Education
Temple University
Philadelphia, PA

Ms. Andrea J. Brown
1055 E. Hyde Park Boulevard
Chicago, Illinois

Beth Berman
2550 Adams Street
Hollywood, Florida

J. K. Lewchuk
Superintendent Pupil Services
Board of Education
St. Paul's R.C.S.S.D. #20
247 - 1st Avenue
North Saskatchewan
Saskatchewan, Canada

Ruth C. Arnold
Associate Professor Education
Stetson University
DeLand, Florida

Ms. Lynda G. Miller
5416 Gaillard Drive
Mobile, Alabama

Steven A. Carlson
7107 CTH FA
LaCrosse, Wisconsin

Pat McIntosh
LD Coordinator
Portage County Board of Education
224 West Riddle Avenue
P. O. Box 843
Ravenna, Ohio

Dean McIntosh, Ed.D.
Consultant
Kanawha County Schools
200 Elizabeth Street
Charleston, West Virginia

Dr. Darvin L. Miller
Coordinator, SLD Program
University of Wisconsin
Stevens Point, Wisconsin

Paul W. Mitchell
Director of Special Education
MRVSEC
Joint Powers District #993
Special Services Center
Lydia School
Jordan, Minnesota

Dr. Ed Sontag
Chief, Program Development Branch
Division of Innovation & Development
Room 2036 BEH
ROB #3, 7th & D St. SW
Washington, DC 20202

Dr. Stanley Urban
Special Educational Services/Instruction
Glassboro State College
Glassboro, New Jersey

Ms. Yvonne Dubeau
Coordinator of Special Education
School District No. 60
9803 - 102nd Street
Fort St. John
British Columbia, Canada

Mr. Fred West, Director
Division of Learning Disabilities
Department of Education
West Frankfort Complex
U.S. Route 127 South
Frankfort, Kentucky

Mr. William Kehoe
Nazareth College
Rochester, New York

Dr. James A. Poteet, Assistant Professor
Department of Special Education
Teachers College
Ball State University
Muncie, Indiana

Dr. Coralie Dietrich
Department of Psychology
University of Wisconsin-Stevens Point
Stevens Point, Wisconsin

Robert A. Stodden
Department of Special Education
Norman Hall, Room 43
University of Florida
Gainsville, Florida

Cynthia Montgomery, Consultant
SLD Services
Nebraska Department of Education
233 South 10th Street
Lincoln, Nebraska

T. J. Feeler, Ed.D.
Educational Consultant
Special Education
Department of Elementary
& Secondary Education
P.O. Box 480
Jefferson City, Missouri

Dolores Sanchez
California Regional Resource Center
University of Southern California
600 South Commonwealth Avenue
Suite 1304
Los Angeles, California

Lawrence Terry, Jr.
Staff Associate
NaLDAP
The Network
Merrimac, Massachusetts

Mr. Donald L. Ward, Principal
Philip C. Showell Elementary School
Indian River School District
Selbyville, Delaware

Mr. Jerald Moore
Educational Disabilities
The Charlotte-Mecklenburg
Board of Education
P.O. Box 149
Charlotte, North Carolina

Mr. Mario Pascal
5981 Venice Boulevard
Los Angeles, California

Sr. Colette Zirbes
Cardinal Stritch College Library
6801 North Yates Road
Milwaukee, Wisconsin

Dr. John Abbott
Penn State Extension Program
649 South Henderson Road
King of Prussia, Pennsylvania

Mr. Dave Greenburg
Indianapolis Public Schools
120 East Walnut Street
Indianapolis, Indiana

Mrs. Deborah Murphy
c/o Hillside School
Route 3
Cushing, Oklahoma

Mr. James N. Riley,
ElDorado School District 15
700 Columbia
ElDorado, Arkansas

Dr. David Uslan, California State
Department of Education
721 Capitol Mall
Sacramento, California

Ms. Janice Jones
Evanston Township High School
1600 Dodge Avenue
Evanston, Illinois

Dr. Tom Jeschke
Des Moines Independent Community
School District
1800 Grand Avenue
Des Moines, Iowa

Dr. Donald R. Lamb, Unified School
District #500, Library Building
625 Minnesota Avenue
Kansas City, Kansas

Dr. Levelle Haynes
Northeast Louisiana University
Strauss Hall, Room 112
Monroe, Louisiana

Dr. Eugene F. Martin
Mississippi State University
P. O. Drawer CT
Mississippi State, Mississippi

Ms. Marie Blackburn
Armatage Learning Center
2501 West 56th Street
Minneapolis, Minnesota

Dr. Robert T. Smith
East Ramapo School District
50 A South Main Street
Spring Valley, New York

Ms. Shirley Moorehead
Ohio Division of Special Education
933 High Street
Worthington, Ohio

Dr. Joe C. Abril
Santa Barbara Center
1420 Edith Street, SE
Alburquerque, New Mexico

Dr. Naomi Zigmond
Division of Specialized
Professional Development
4616 Henry Street
Pittsburgh, Pennsylvania

Dr. Stuart Brown
South Carolina Region V
Education Service Center
P.O. Box 1069
Lancaster, South Carolina

Ms. Joan Williams
Division of Special Education
Texas Education Agency
201 E. 11th Street
Austin, Texas

Mr. Steve Howard
1729 - 28th Street, Apt. L
Greevey, Colorado

Dr. Joseph C. Reed
Region V, Board of
Cooperative Education Services
P. O. Box 112
Kemmerer, Wyoming

Mrs. Ann Prewitt
Project Nova Director
Kingsville Public Schools
P.O. Box 871
Kingsville, Texas

Mary E. Connelly, M.Ed., President
Oakland Association for the
Gifted and Talented
6180 West Surrey
Birmingham, Michigan

Earl R. Owens, Ed. D.
Director, Special Education
Northwest Nazarene College
Nampa, Idaho

Mr. David Malouf
University of Oregon
College of Education
Clinical Services Building
Rehabilitation Research & Training
Center in Mental Retardation
Eugene, Oregon

Joseph J. Stowitschek, Ed.D.
Assistant Professor
Faculty of Special Education
Box 512, George Peabody College
for Teachers
Nashville, Tennessee

Ms. Karen McIntyre
Educational Resource and Services
600 South Commonwealth Avenue
Suite 1304
Los Angeles, California

Joan M. Bartel, MELRS at UNC
Room 301, NCNB Plaza
136 East Rosemary Street
Chapel Hill, North Carolina

Mr. M. Van Den Berghe
Coordinator of Special Education
Foxborough Public Schools
Foxborough, Massachusetts

Myrna Smith
Secondary LD Specialist
Fairfax County Public Schools
10700 Page Avenue
Fairfax, Virginia

Ms. Virginia Hatch
Resource Room
Hopedale Junior-Senior High School
Hopedale, Massachusetts

Robert C. Dietiker, Director
Western Wayne County Learning Center
30450 MacKenzie
Westland, Michigan

W. Donald Crump, Director
Learning Disabilities Program
Box 2592
University of Alabama
University, Alabama

Leon D. Silber, Ed.D.
Coordinator, Learning Disabilities Section
Division for Exceptional Children
Department of Public Instruction
Raleigh, North Carolina

Richard C. Gacka
Assistant Director of Special Education
Northwest Tri-County Intermediate Unit
252 Waterford Street
Edinboro, Pennsylvania

Mrs. Judith H. DiMeo, Coordinator
Resource Consultant
Rhode Island College
Department of Special Education
Providence, Rhode Island

Mr. Thomas Walsh
Director of Learning Disabilities
Nazareth College of Rochester
4245 East Avenue
Rochester, New York

Mrs. Jean Petersen
Executive Secretary
Association for Children with Learning Disabilities
5225 Grace Street, Lower Level
Pittsburgh, Pennsylvania

William C. Hawes, Principal
Vanguard School
Box 277
Haverford, Pennsylvania

Sheldon Stern
Superintendent of Special Classes
Central Susquehanna I.U. #16
103 Brown Street
Lewisburg, Pennsylvania

Miss Kathleen Finnegan
Child Study Institute
Bryn Mawr College
Bryn Mawr, Pennsylvania

Barry J. Chasen, School Psychologist
North Penn School District
400 Penn Street
Lansdale, Pennsylvania

John Fazzini
Coordinator of Pupil Services
North Penn School District
400 Penn Street
Lansdale, Pennsylvania

Patricia Sampson, L.D. Teacher
North Penn School District
400 Penn Street
Lansdale, Pennsylvania

Theodore Goldberg
School Psychologist
Spring-Ford School District
Lower Lewis Road
Royersford, Pennsylvania

Russ Waring
Greencastle-Antrim High School
Greencastle, Pennsylvania

Martha A. Jones
Lincoln Intermediate Unit #12
P. O. Box 70
New Oxford, Pennsylvania

Nancy Sprenkle
Lincoln Intermediate Unit #12
1712 East Main Street
Waynesboro, Pennsylvania

Lucille Burbank
PRISE
443 South Gulph Road
King of Prussia, Pennsylvania

Dr. Paul Goode
PRISE
443 South Gulph Road
King of Prussia, Pennsylvania

Janice Baugher, L.D. Teacher
North Penn School District
400 Penn Street
Lansdale, Pennsylvania

Mrs. Joy Register
President Franklin City ACLD
Route #3, Box 62
Greencastle, Pennsylvania

Mr. Frank Luther,
Assistant Principal
Upper Merion Area Junior High School
Crossfield Road
King of Prussia, Pennsylvania

Frank Wright
Coordinator Pupil Personnel
Upper Merion School District
King of Prussia, Pennsylvania

Elaine Bullard, Psychologist
Upper Merion Area School District
King of Prussia, Pennsylvania

Dr. Loretta Quarmley
Assistant Professor Psychology
Marywood College
Scranton, Pennsylvania

Dr. Marechal-Neil E. Young
Associate Superintendent of
Special Education
The School District of Philadelphia
1801 Market Street
Philadelphia, Pennsylvania

Dr. Kenneth Vayda, Chairman
Department of Special Education
Clarion State College
Clarion, Pennsylvania

David B. Ross
Director of Education
Harborcreek School for Boys
4712 Iroquois Avenue
Harborcreek, Pennsylvania

Raymond Pizor
5915 Jefferson Avenue
Ashtabula, Ohio

Audrey R. McMahon
2991 Princeton Pike
Trenton, New Jersey

Harriet Grass
Cornman Diagnostic Center
12th and Melon Streets
Philadelphia, Pennsylvania

Mrs. Willetta Silva-Shadday
Cornman Diagnostic Center
12th and Melon Streets
Philadelphia, Pennsylvania

Dr. Michael R. Kahn
Psychology Department
University of Hartford
West Hartford, Connecticut

Timothy G. Roberts, Ed.D.
Bowling Green State University
Department of Special Education
Bowling Green, Ohio

Larry A. Faas, Ed.D., Professor
Department of Special Education
Arizona State University
College of Education
Temple, Arizona

Stan Shaw, Ed.D.
Assistant Professor
Educational Psychology
University of Connecticut
Storrs, Connecticut

Dr. Paul Irvine
Director of Special Education Services
Board of Cooperative Education
Building A, Northmoor Drive
Yorktown Heights, New York

Dr. Leon Hymovitz
Principal, Harrington School
2126 Fanshawe Street
Philadelphia, Pennsylvania

Dr. Clyde G. Corle
Retired Professor Education
213 Harris Drive
State College, Pennsylvania

Audrey R. McMahon
Parent Volunteer
2991 Princeton Pike
Trenton, New Jersey

Ms. Ann Christianson
713 South Sixth Street #204
Champaign, Illinois

Miss Gaye McNutt
504 Swanee Drive #106
Austin, Texas

J. Gerald Minskoff, Ed.D.
Professor
Department of Special Education Services
Madison College
Harrisonburg, Virginia

Dr. Eleanor Westhead
Department of Special Education
University of Virginia
Charlottesville, Virginia

Katherine Payne Hinz
2 Little Spring Run
Fairport, New York

Janice H. Giunta, Director
Learning Assistance Center
Snow College
Ephraim, Utah

Barry R. Culhane, Chairman
General Education Support Team
Rochester Institute of Technology
National Institute for the Deaf
One Lomb Memorial Drive
Rochester, New York

Mrs. Mary B. Crum
Coordinator, Title III Project
Denmark-Olar Senior High School
P.O. Box 98
Denmark, South Carolina

Ms. Carol Bradley
Department of Public Instruction
Division of Special Education
Grimes State Office Building
Des Moines, Iowa

Ms. Eileen Nahm
976 Midland Road
Oradell, New Jersey

Mary F. McElhattan
118 Gilfillan Street
Franklin, Pennsylvania

Ms. Meg Adelwar
Cornman Diagnostic Center
Melon East of 12th Street
Philadelphia, Pennsylvania

Dr. Thomas Lovitt
Child Development and MR Center
Experimental Education Unit
University of Washington
Seattle, Washington

Dr. Richard Keim
East Penn School District
640 Macungie Avenue
Emmaus, Pennsylvania

Dr. Judy Wilson
University of Kansas Medical Center
39th Street at Rainbow Boulevard
Kansas City, Kansas 66103

Mr. John Lombardo
Main Line Day School
Darby Road and College Avenue
Haverford, Pennsylvania

Mrs. J. W. Hahle
405 Midway
Riverton, New Jersey

Catherine Dintere
3658 Canby Drive
Philadelphia, Pennsylvania

Dr. Albert Johnson
3842 Bonnymead Circle
Harrisburg, Pennsylvania

Francis X. MacKinnon
Director of Special Education
Regional Center for Special Services, Inc.
P.O. Box 55
Lincoln, Rhode Island

Dr. Chet Wesner
Director of Special Education
Chichester School District
P. O. 2100
Boothwyn, Pennsylvania

Harold Jackson
Educational Consultant
C.R.R.C.
600 South Commonwealth Avenue
Suite 1304
Los Angeles, California

Angela Lepore & John Burnham
C/O John F. Cawler
University of Connecticut
Box U-7
Storrs, Connecticut

Nancy D. Mason
Educational Specialist
Jefferson County Public Schools
Regional Diagnostic Team #1
3819 Bardstown Road
Louisville, Kentucky

Robert J. Brooks, Consultant
Area Learning Resource Systems
Bureau of Education for Exceptional Children
West Frankfort Complex
U. S. Route 127 South
Frankfort, Kentucky

Dr. Joseph Bellucci
Wilkes College
Wilesbarre, Pennsylvania

Ronald Weber
Winthrop College
School of Education
Rock Hill, South Carolina

Irwin Rosenthal, Ph.D.
Department of Student Services
Kingsborough Community College
of the City University of New York
Oriental Boulevard, Manhattan Beach
Brooklyn, New York

Lisbeth E. Gets
4601 N.W. 13th Avenue
Gainesville, Florida

Ms. Bobbey S. Draughon
Pinebrook Elementary School
Route 3
Mocksville, North Carolina

Library
Oregon College of Education
Monmouth, Oregon

Susie VanDeVeer
Consultant
Wake County Public School System
Division of Pupil Services
P. O. Box 28041
Raleigh, North Carolina

Alan Kite
331 Rose Street
Lexington, Kentucky

Grace England
Director of Resource Services
Klein Independent School District
7200 Spring-Cypress Road
Spring, Texas

Carol McIntosh
Associate Director for Library Services
University of Texas at Austin
College of Education
Texas State Learning Resource Center
Education Building, Room 348
1912 Speedway
Austin, Texas 78712

Jeanette E. Fleischner
Assistant Professor of Education
Teachers College, Columbia University
Department of Special Education
New York, New York 10027

Helen Wennberg
Pilgrim High School
111 Pilgrim Parkway
Warwick, Rhode Island 02888

Diane D. Higgins
Fairport Central School District
38 West Church Street
Fairport, New York 14450

W. Ellison
Family and Child Clinic
286 E. Hamilton Avenue
Campbell, California 95008

Mary F. McElhattan
118 Gilfillan Street
Franklin, Pennsylvania 16323

Dr. Coralie Dietrich
Department of Psychology
University of Wisconsin-Stevens Point
Stevens Point, Wisconsin 54481

Janis Valaskovic
9700 East Iliff, J-122
Denver, Colorado 80231

Peggy Thorpe
Social Work Consultant
Northeast Learning Resource System
168 Bank Street
Hightstown, New Jersey 08520

Jan Cole, Librarian
The College of the Ozarks
Clarksville, Arkansas 72830

Dr. DeBoer
Special Education Department
Ball State
Muncie, Indiana 47306

Ms. Cindy Walcoff
Colwin Elementary School
Second and Pine Streets
Colwin, Pennsylvania 19023

Thomas D. Rowland, Director
Education Evaluation Center
Oregon College of Education
Monmouth, Oregon 97361

Geraldine C. Stanfield
Learning Disabilities Specialist
South County Administration Offices
505 South Congress Avenue
Boynton Beach, Florida 33435

Shirley Amond, Director
Special Services
Johnson County Schools
500 Earlywoods Drive
Franklin, Indiana 46131

Mrs. Elissabeth Lussow
Pawling High School
Pawling, New York 12564

Kerry Tuten
254 Iven Avenue
Apartment 1-B
St. David, Pennsylvania 19087

Ms. Kathleen McGrath
VI-G Information Disseminator
USOE, BEH
ROB-2, Room 2620
7th and D, S.W.
Washington, D.C. 20202

Carol Childers
Box 1328
Lumberton, North Carolina 28358

Carol Adams
P. O. Box 1028
Williamston, North Carolina 27892

Mary Hagenschmidt
c/o SDS
Lucy Herring School
85 Mountain Street
Ashville, North Carolina 28801

Carolyn Bender
5807F
Sharon Road
Charlotte, North Carolina 28210

Marion Krueger
Box 3823
Durham County Schools
Durham, North Carolina 27702

Anne Bromby
624 Ashe Avenue
Cary, North Carolina 27511

Mildred Braxton
Horace Sisk Junior High
Devers Street
Fayetteville, North Carolina

Virginia Bryant
Horace Sisk Junior High
Devers Street
Fayetteville, North Carolina

Kathryn Mastrofski
Box 3823
Durham County Schools
Durham, North Carolina 27702

Sharyn Simpson
Appalachian State University
Special Education
Boone, North Carolina 28607

Mrs. Mertie Council
527 Albany Street
Fayette, North Carolina 28301

Alma W. Davies
McDowell County Schools
Box 130
Marion, North Carolina 28752

Luetta B. Williams
7372 Hyannis Drive
Fayetteville, North Carolina 28304

Becky McCann
1409 W. David Street
Burlington, North Carolina 27215

Sarah G. Southern
P. O. Box 864
Denton, North Carolina 27239

D. Grady Harrell
Director of Exceptional Children
Pender County Schools
P. O. Box 1239
Burgaw, North Carolina 28425

Eve Williams
J.H. Rose High School
Elm Street
Greenville, North Carolina 27834

Jean J. Darden
J.H. Rose High School
Greenville, North Carolina 27834

Martha Safarian
Bethany High School
Reidsville, North Carolina

Dr. Geroge Marsh
University of Arkansas
Gratuate Education Building
Fayetteville, Arkansas 72701

Sue Dando
615 Bridle Road
Glensdie, PA 19038

Donna Sawicki, Ph.D.
Director
Project LEARN
St. Louis County
Juvenile Court
501 South Brentwood Blvd.
Clayton, MO 63105

Linda Vance, Coordinator
Project MELD
Tuscaloosa County Board of Education
P. O. Box 2568
Tuscaloosa, Alabama 35401